

# The Manager

## MANAGEMENT STRATEGIES FOR IMPROVING HEALTH AND FAMILY PLANNING SERVICES

### In this Issue

|  |    |
|--|----|
| What is Financial Management? .....  | 2  |
| Recognizing the Role of Financial Management .....   | 3  |
| Roles of Program and Financial Managers .....  | 5  |
| The Financial Management Model .....   | 7  |
| Using Financial Management Tools and Applications to Make Decisions .....                  | 8  |
| Budgets .....  | 8  |
| Methods of Financial and Managerial Accounting .....                                       | 13 |
| Essential Financial Records .....  | 15 |
| Cutting Costs .....  | 16 |
| Analyzing Financial Information .....  | 18 |
| Financial and Managerial Reports .....   | 19 |
| Using Financial Information to Make Management Decisions .....                             | 21 |
| Improving Your Financial Management System .....   | 24 |
| Taking a Comprehensive Approach to Financial Management .....                              | 28 |
| Working Solutions—Jamaica .....  | 29 |
| Glossary of Financial Management Terms .....   | 31 |
| References .....   | 32 |
| Reviewers' Corner .....  | 33 |
| Checklist for Understanding and Using Financial Management Systems to Make Decisions ..... | 34 |

### Supplement

Guide to Computerizing Your Accounting System

## Understanding and Using Financial Management Systems to Make Decisions

### Editors' Note

Many program managers consider financial management a complex, uninteresting, or even frightening topic. They may prefer to leave the responsibility for financial management in the hands of accountants, bookkeepers, and finance officers. Today, however, organizations rely on *all* their managers to help allocate and monitor resources in order to achieve programmatic goals. Thus, program managers need to understand the basics of financial management, and financial managers need to develop a broader vision of their own role. Both types of managers must learn to seek input from each other during planning, share information during program implementation, and collaborate in monitoring and evaluating the organization's work.

This issue of *The Manager* presents the key concepts and tools required to prepare financial plans and to monitor and use program resources responsibly, appropriately, and cost-effectively. It discusses the role of financial management in health organizations and the role of both program and financial staff in making financial management work. It presents a financial management model and discusses each layer of the model, including budgeting and accounting tools, financial analysis applications, and important financial and strategic decisions. The accompanying supplement, *Guide to Computerizing Your Accounting System* provides detailed instructions on how to assess and automate accounting—a valuable step toward improving your organization's overall financial management system.

—The Editors

## The Manager

### Editorial Review Board

**Dr. Alfredo Ariñez**, JHPIEGO, Bolivia

**Med Bouzidi**, International Planned Parenthood Federation, London

**Dr. Borbala Köö**, SECS, Romania

**Maria Isabel Plata**, PROFAMILIA, Colombia

**Jewel Quallo Rosberg**, Belize Family Life Association

**Dr. Sin Somuny**, Reproductive and Child Health Alliance, Cambodia

**Dr. Enrique Suárez**, The Mexican Federation of Private Health and Community Development Associations

**Dr. A.B. Sulaiman**, Planned Parenthood Federation of Nigeria

**Sixte Zigirumugabe**, CARE, Togo

### Field Advisors

**Abu Sayeed**, FPMD/Bangladesh

**Dr. Eléonore Rabelahasa**, MSH/Madagascar

Subscriptions to *The Manager* are \$15/year in North America, Western Europe, Japan, and Australia; in all other areas the publication is distributed free of charge. Postmaster: Send address changes to: 165 Allandale Road, Boston, MA, 02130-3400 USA.

### Editorial Directors

**James Wolff**  
**Janice Miller**

### Editor

**Janice Miller**

### Associate Editors

**Laura Lorenz**  
**Claire Bahamon**

### Consulting Editors

**Susanna Binzen**  
**Ann Buxbaum**  
**Saul Helfenbein**

### Desktop Publishing

**Ceallaigh Reddy**

### Distribution

**Mark Nevin**  
**Luc-Bernard Val**

### Internet Editions

**Jennifer Rodine**

*The Manager* (ISSN 1060-9172) is published quarterly in English, French, and Spanish by Family Planning Management Development (FPMD), a project of Management Sciences for Health. This publication does not represent official statements of policy by MSH or USAID.

Recommended citation: Management Sciences for Health. "Understanding and Using Financial Management Systems to Make Decisions." *The Manager* (Boston), vol. 8, no. 4 (1999): pp. 1-34.

**Family Planning Management Development  
Management Sciences for Health**  
165 Allandale Road  
Boston, Massachusetts 02130-3400 USA

**Phone:** (617) 524-7799

**Fax:** (617) 524-2825

**E-mail:** [bookstore@msh.org](mailto:bookstore@msh.org)

**URL:** <http://www.msh.org>



Published with support  
from the U.S. Agency for  
International Development.

## What is Financial Management?

Financial management is a necessary tool for supporting the organization's goals and objectives. Its purpose is to provide information that assists program managers to make the organization's short- and long-term plans a reality. Financial management involves controlling, conserving, allocating, and investing the organization's resources, including personnel, equipment, supplies, and the non-monetary contributions of volunteers and donations. It goes beyond the traditional accounting focus on recording and reporting of financial transactions, to focus on analysis and decision making.

Financial management is about analyzing financial performance, identifying ways to use resources efficiently, and finding creative ways to use resources to generate additional resources. Financial management activities include:

- matching available resources to the activities planned by the organization;
- monitoring the efficiency of current resource use;
- identifying ways to reduce and recover costs;
- finding ways to finance new initiatives;
- identifying trends in past resource usage, in order to determine future budget requirements, project cash needs, and forecast financial growth;
- managing and investing current resources to make them profitable;
- developing long-term financial plans to meet future resource requirements;
- controlling and attempting to prevent major risks.

In many organizations, managers think of financial management as a specific responsibility to be carried out by those with special training. While it is true that financial management is a distinct discipline, it is also important to recognize that anyone who is responsible for planning, purchasing, monitoring, or using monetary, human, or other resources is a financial manager to some extent. In fact, managers at all levels must concern themselves with financial matters or they will soon find that they lack the resources to accomplish long-term goals or to maintain day-to-day operations. As a manager, your role is to seek the most efficient uses of the resources you control, in order to carry out activities in a way that supports your organization's goals and strategic plans.

To help you fulfill your financial management role, this issue presents:

- the importance of financial management, including issues specific to nonprofit or governmental organizations;

- a financial management model, including the key tools, applications, and decisions involved;
- suggestions for ways to improve financial management in your organization.

This issue also provides a supplemental *Guide to Computerizing Your Accounting System*. The *Guide* includes a list of questions to help assess your current system and determine whether computerization is appropriate. It also provides an overview of the steps involved in computerizing an accounting system or upgrading an existing computerized accounting system.

This issue was written by Melanie Powers and Natalie Gaul of Management Sciences for Health. Melanie Powers is Deputy Director of the Family Planning Management Development project, Finance and Operations, and Natalie Gaul is Senior Program Officer for Finance and Budgets. Ms. Powers and Ms. Gaul have worked extensively in developing, implementing, and training staff to use financial management systems in public- and private-sector organizations in numerous countries around the world, including Bangladesh, Bolivia, Jamaica, Kenya, Romania, Turkey, and the United States.

### Notes on Using this Issue

This issue uses many financial management and accounting terms. You can find definitions of these terms in the glossary beginning on page 31. For an illustration of some of the concepts presented in the text, look for the “Case of the Runaway Training,” a fictitious example that runs through the issue. Throughout the issue, take particular note of the advice highlighted by the following symbols:



The **key** indicates a particularly useful financial management tool or concept.



The **lock** warns readers about unwise financial practices and common pitfalls.

## Recognizing the Role of Financial Management

In health and family planning organizations, the purpose of financial management is to support and enhance the delivery of health services to the community. Good financial management can allow your organization to make programmatic decisions, expand the areas served, or consider new populations in need.

Since health and family planning organizations exist in both the governmental and nongovernmental sectors, you may find that special considerations apply:

**Public-sector health organizations** often contend with layers of government systems, politically influenced financial decisions, and frequently changing leadership or leadership that never adapts to market pressures. They typically have poor access to high-quality financial information and little control over budgets and costs. In this environment, financial management is all the more critical—yet hard to achieve effectively. If you are a public-sector manager having difficulty implementing the concepts described here, limit your focus to reducing costs, improving efficiency, managing existing sources of funds effectively, and lobbying the government’s planners and financial managers to get better information.

**Nongovernmental health organizations**, including civil society organizations, operate as nonprofits in the private sector. To be fiscally healthy, they must hold their net value (income after all expenses) in reserve. These reserves, or surpluses (also called fund balances), allow the organization to sustain its current services, survive in periods of cash-flow crisis, grow, or even subsidize services that need to be affordable. Some nonprofit organizations operate with very low reserves, believing that the nature of their mission is inconsistent with an emphasis on cost recovery or revenue generation. As a result, they may lack funds to innovate, make necessary improvements, expand services, develop new funding sources, or even do basic maintenance. Most critically, their sustainability is at great risk should any unforeseen catastrophe arise.

Nonprofit organizations may benefit from certain tax exemptions or from access to special discounts. However, their financial management is usually complicated by multiple funding sources and donor requirements. They may be required to:

- keep donated funds separated by donor, which calls for fund or contract accounting (described in the section on accounting methods, beginning on page 13);
- present their financial information in distinct reporting formats required by different donors or governmental agencies;
- track cost-sharing and in-kind contributions;

- account for the costs of volunteer workers.

These requirements are complex, time-consuming, and subject to change whenever donor funding levels or the number of donors change. If you are a manager in a nonprofit health organization, focus on making financial management flexible and efficient, identifying ways to generate revenues, reducing risks (such as dependency on a small number of donors), and developing sound financial information systems that can meet the reporting needs of multiple donors.

**For-profit health organizations**, such as private hospitals and clinics, operate to meet community health needs and to make money for owners, shareholders, or other financial partners. Their need for reliable and timely financial information and competent financial management is no more or less important than it is for not-for-profit organizations. However, the emphasis and internal value given to financial management activities may vary greatly. For-profit institutions must pursue a high standard of quality in their services because poor quality will cost them money. At the same time, making money is a higher priority than in nonprofit settings. For-profit organizations are therefore more likely to hire managers based on their financial management skills. If you are a manager in a for-profit health organization, you must always focus on balancing the goals of cost, quality, and expansion.

### **Financial Management Considerations for Health and Family Planning Organizations**

All organizations, even nonprofits, must cover their costs. Some health organizations, deeply involved in their service-oriented mission, feel that cost should be a secondary consideration and that services should be delivered even when they cannot be adequately funded. Ultimately, however, if the bills are not paid, the services will no longer be provided, which is a greater loss to the community. Managers of health, family planning, or other service-oriented organizations would do well to imitate or adapt the following strategies used by for-profit businesses:

- Identify strategies to offset the high costs of providing health services. Include these strategies (for example, charging fees and receiving and reinvesting program income) in the organization's strategic business plan.

- Consider passing on some costs to the client by charging fees, if acceptable given the organizational mission, local laws, and community resources. For some organizations it may even be appropriate to charge fees beyond the level required to cover basic costs. Such fees can contribute to reserve funds that will help sustain and perhaps expand programs so that the mission can be met more fully. (For information on implementing a fee-for-service program, please refer to “Charging Fees for Family Planning Services,” *The Family Planning Manager* Volume II, Number 2.)
- Take advantage of opportunities to invest money. Buying a facility, making capital improvements, and marketing are examples of investments that can improve and broaden access to services. For more information on how nonprofits can invest, please refer to the information sources listed in the References section on page 32.
- Use financial analysis, including comparative performance analysis, to identify and address the organization’s inefficiencies. Financial analysis can help the organization maintain a competitive position and cost-effective services.



Beware of the inclination to bid low on competitive contracts or to price services low to attract new clients. Such “loss leaders” may be intended to bring in new business, but they can lead to losses if the risk is not carefully managed. Over time, the drain on reserves will weaken programs and jeopardize the organization’s future.

## Roles of Program and Financial Managers

Because most management decisions require both financial and program information, program and financial managers need to work as a team to determine which objectives to pursue, which to modify, how to restructure activities, and how to deploy resources.

In some organizations, traditional barriers exist between program and financial staff members. If such divisions exist in your organization, work with staff members to help them understand that both sets of skills are necessary to achieve program and service objectives. You may be able to address the gap in perspectives by implementing activities that integrate both functions and that require staff members to work together in teams, by reviewing the organizational mission, and even by creating “cross-over” positions. Many organizations create operations or project management units that consist of staff members with technical skills in both program and financial management areas.

When the goals of program managers are in competition with the goals of financial managers, you should help the managers integrate the full set of goals and then determine whether they are all in line with the organizational mission. One of the reasons that we suggest that all program managers must also be financial managers to some extent is to help recognize and manage this problem. While both program and financial managers must be concerned with the organization’s mission and the delivery of quality services, traditionally their roles are divided.

The role of the program manager is to:

- develop plans and strategies that support the organizational mission and communicate these to financial managers;
- monitor the impact of changing plans on resource requirements and communicate with his/her financial counterparts;
- express program needs for financial information to the staff members who generate the reports;
- analyze financial reports and work with financial managers to make decisions.



The role of the financial manager is to:

- determine the cost of all the inputs of operational activities, including equipment, labor, and goods and services;
- forecast revenues (sources of funds) and future expenses (uses of funds);
- work with program managers to allocate and monitor current resources;
- make sound recommendations about how to invest resources;
- manage organizational risk.

When program and financial managers collaborate, their objective should be to get the best possible result from the available resources, both in the short and long term. When they do not succeed, the resulting management may have very costly results for the organization, as discussed in the following box.



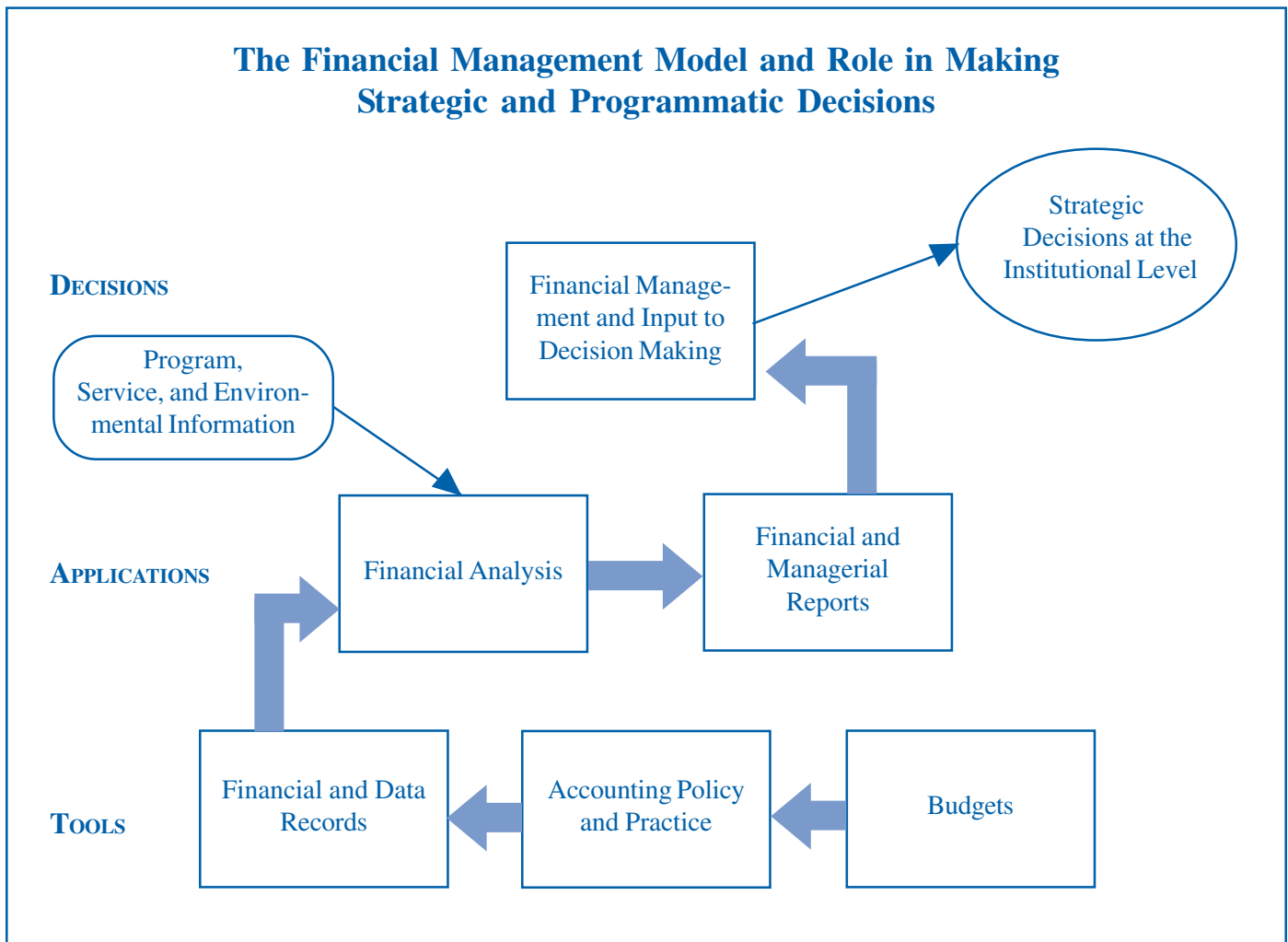
### Pitfalls for Program and Financial Managers to Avoid

- **Crisis management.** Organizations that do not plan and budget well often require last-minute efforts to get their work done. The result is expensive overtime, missed opportunities to negotiate pricing with vendors, missed opportunities to use slow periods to accomplish work for little additional cost, and an increased chance of making budgeting errors.
- **Unrealistic price setting.** Organizations that set low prices for goods and charge low user fees in hopes of attracting clients may find that they are unable to recover their costs. If their prices are too low, the organization may continuously lose money—a particularly dangerous situation for a nonprofit organization.
- **Inaccurate analysis of the real cost of doing business.** Organizations often undervalue their program costs unintentionally—for example, by neglecting to consider fixed costs (such as rent) when pricing services. As a result, they continuously lose financial ground. They often react by trying to increase the volume of services. However, if the full cost of each service provided is not recovered, the only result of increasing service volume is larger losses.
- **Single major funding source.** Many organizations or programs depend heavily for funding on a single donor or on the government. The organization's activities may not be sustainable if the funding source decreases its funding. Environmental analysis and strategic planning can help determine how best to address this situation.
- **Failure to react to environmental changes.** Organizations must track the external and internal environments carefully, to avoid missing opportunities for new funding or to take advantage of unused funds. Organizations must also be on the lookout for spiraling costs and react quickly, setting prices or cutting costs accordingly.
- **Managers' lack of skills in analyzing financial information.** Organizations whose managers do not have access to financial information or are not trained to interpret such information are at the greatest risk. These managers are not able to recognize risk or make appropriate decisions about the use of limited resources; they contribute to all the pitfalls listed here. All managers must be trained to read, analyze, and react to the available financial reports in a timely manner, as all management decisions have a financial component.

## The Financial Management Model

The role played by financial management in helping an organization make its strategic decisions is depicted in the following diagram. At its base, the financial management pyramid is built on the tools of budgeting, financial records, and accounting policy and practice. This foundation supports the building blocks that represent the applications of financial

management: the analysis of budgeting and accounting information and the creation of meaningful managerial reports. In turn, financial analysis and managerial reports support the management decisions and recommendations that constitute the peak of the pyramid. These decisions rely on informed managers to make the best possible use of the tools and applications at their disposal.



---

# Using Financial Management Tools and Applications to Make Decisions

Consider the following two scenarios:

► *A nongovernmental organization (NGO) that provides clinic- and community-based family planning and reproductive health services has been asked by the Ministry of Health to be the lead agency in planning and hosting training associated with new government programs related to the integration of HIV/AIDS services. The NGO has been asked to provide the necessary training and conferences on a fee-for-attendance basis, with the government making attendance mandatory for all prospective service providers. How will the NGO's leaders establish an adequate and reasonable fee for the first conference? How will they evaluate whether this is a good direction for the organization?*

► *The national child survival program has received word from the Ministry of Health that its budget will be cut by 20 percent. The program managers hope to make up the difference without cutting services. What tools or techniques might be used to help them achieve a 20 percent reduction in costs?*

If you are a manager in a health or service organization, you are probably familiar with scenarios such as these. These situations illustrate the kinds of financial management decisions that need to be made related to the allocation of resources. Other areas where financial management decisions are made include:

- maximizing labor and staffing patterns;
- defining the mix of services;
- projecting future costs;
- developing new business;
- managing risk.

Making the right decisions requires good financial information about the costs of individual resources, the costs of producing specific outcomes,

expenditures over time, and expected revenues. These decisions also require programmatic information, such as the local demographic profile, epidemiological data, client demand, service utilization, and governmental regulations.

The purpose of this issue is to provide you with tools, concepts, and illustrations that will help you answer the questions raised in the scenarios above. The first scenario is illustrated in the “Case of the Runaway Training,” an example that runs throughout the issue. As you read the issue and the running case study, think about how you might use the ideas presented to respond to the second scenario about the manager of the child survival program.

The following sections describe each of the building blocks in the financial management pyramid.

- First, the tools that serve as the foundation of the financial management model are described, as are some of the issues related to costing and pricing that arise during budgeting.
- Second, a discussion of the applications of some of these tools includes a focus on the uses of financial management (such as cost-cutting strategies, financial analysis concepts and indicators, and key output reports).
- Third, a review of the types of decisions that can be made when a good financial management system is in place.

## Using the Basic Tools

In this section, you will read about the main tools used in financial management: budgets (including costs and prices); accounting standards and methods of financial and managerial accounting; and essential financial records (such as the chart of accounts).

### Budgets

A budget is a document that projects the costs, and in many cases the revenues, of a defined activity, program or project, or organization. A good budget is the fundamental tool that you need for financial management. It is a financial plan that quantifies the organization's programmatic goals and objectives by



guiding the allocation of financial and human resources. You can use the budget, together with periodic expenditure reports, to review expected costs against actual spending, to identify which programs are more or less cost-effective, to predict cash needs, to determine where costs must be cut, and as input into difficult

decisions such as which programs to discontinue. You can also use an accurate and complete budget to leverage additional funding, as a marketing tool, and to support cost proposals. It is a dynamic tool that should be used regularly by members of both the financial and management staff.



### Characteristics of Good Budgets

**Budgets cover a defined set of activities.** Budgets may cover single activities or whole programs or projects. When budgets are constructed at a level below the total program, they should be able to be “rolled up” (combined) with other budgets to form a total operating budget.

**Budgets state the time period covered.** Generally, budgets cover one fiscal year or operating year and are often divided into quarters or months. Multi-year budgets must make provisions for inflation, currency and cost fluctuations, staff pay increases, and any other costs that may increase annually.

**Budgets are realistic about expected revenues.** It can be difficult to define in advance how an activity or program will be financed; however, anticipated revenues and costs should be identified during budget preparation in order to keep budgets realistic.



A budget that is based on a “best-case scenario” can overestimate revenues and underestimate costs. The result may be severe temporary cash shortfalls and/or inadequate funds for implementing programs, as well as disheartened staff members. A budget that is based on the “worst-case scenario” can underestimate potential sales and revenues and overestimate expenses. As a result, there may be too little slack in the budget for unforeseen problems. Furthermore, there will be no incentive to control costs or be aggressive in seeking sources of revenue, so staff performance may be mediocre.

**Budgets include indirect costs.** While direct costs such as rent and salaries are obvious components of a budget, indirect costs are often overlooked, although they are equally important. The two most common indirect costs are fringe benefits and overhead (often referred to as “general and administrative costs”). Fringe benefits may include holidays, sick and vacation leave, pensions, and insurance. These costs are generally applied as a percentage of direct labor. Overhead costs cover the use of buildings and general and administrative costs (such as accounting and secretarial costs). They are commonly applied as a percentage of the total budget but may also be applied to a modified total of the budget or to some other combination of cost categories.

**Budgets are based on collaboration between the program and financial managers.** Without collaboration, a budget may fail to meet the requirements of either group. *For example, it is difficult to monitor an activity budget that runs from September to September if the accounting data run from December to December.* Collaboration will ensure that the line items in the program budget are consistent with the chart of accounts. In some cases, the chart of accounts may dictate the budget format. In others, budgeting needs may drive a change to the chart of accounts.

---

**Budget preparation.** Budgets are designed to meet two sets of needs. For operational purposes, budgets help your organization allocate available resources as effectively as possible and monitor and control costs. For management purposes, budgets help your organization's managers make decisions, including comparing different assumptions about the costs of budget items ("scenario planning").

There are two times that organizations can prepare budgets during their planning process:

- Some organizations prepare budgets before allocating available funds. This is called "zero-based budgeting". These organizations first create an ideal budget that includes all desired activities. Then they consolidate the results, decide which activities will have the most impact for the least cost or what quantities of different budget items are affordable, and finalize the budget accordingly.
- Other organizations prepare budgets after funds have been allocated. These organizations identify available funding first and allocate it to individual programs or projects. The programs then create budgets that plan for the most effective use of the allocated money.

Budget preparation involves documenting the budget assumptions and carefully reviewing the budget decisions. If you are a program manager, your role is to provide guidance about what type of budget best serves the given circumstance, and to supply or test the assumptions underlying the budget. The final step in budget preparation is to review the integrity of the budget assumptions and the accuracy of the mathematical calculations.

(For more details on preparing a budget and key budget categories, please refer to "Developing Plans and Proposals" *The Family Planning Manager* Volume II, Number 4.)

**Budget Monitoring.** During the implementation of a project or activity, both program and financial managers should monitor the budget in order to control costs and ensure compliance with organizational or contract requirements. You can simplify and improve the effectiveness of budget monitoring if you work with the appropriate staff to incorporate the original budget into any financial statements, especially the income statement (described later in this section). In this way, you can compare actual spending or revenue against what was planned—just as the work plan is used to compare activities against plans.

As a manager, you should always review the financial statements and reports, compare the budgeted and actual expenses, and ask questions about why costs are exceeding or falling below expectations. The answers may lie on the budgeting side (incorrect budget assumptions, unexpected usage of resources, or unanticipated price changes) or on the program side (increased demand, implementation problems). Whenever you notice discrepancies between the actual figures and their projections, you should always react. The reaction may range from asking more questions to modifying the work plan; you may choose to change the budget, or even to stay on course. What is important is to make a decision to take—or not to take—some type of action.

## Budgeting and Price Setting in Practice

### The Case of the Runaway Training: Part I

The Reproductive Health Association of Kenya (RHAK) has been asked to host a training conference to launch the national campaign to integrate HIV/AIDS services into clinic- and community-based reproductive health and family planning services. The training will be by invitation; many of the most respected leaders in the government and from the NGO community will be presenters. The RHAK is expected to make all conference arrangements and to charge participants a fixed registration fee to cover their expenses. A conference planning team has been appointed, led by Mr. Carin, and the team has completed the following budget:

|                       |                 |
|-----------------------|-----------------|
| Travel:               | \$2,500         |
| Per Diem:             | 7500            |
| Conference Materials: | 900             |
| Office Supplies:      | 200             |
| Phone and Postage:    | 300             |
| Honoraria:            | 1000            |
| <b>Total Budget:</b>  | <b>\$12,400</b> |

RHAK expects 45 paying participants and five non-paying staff members from RHAK. Based on the total budget divided by the number of paying participants, the planning team has set the registration fee at \$275 per person. The team members are confident they will cover RHAK's costs for attendance and preparation.

When Mr. Carin presents this plan to the RHAK Director, Mrs. Kiema, she immediately exclaims that the registration fee is too high and expresses concern that they will not have full participation at this price. At the same time, she indicates that she would like this activity to be a small moneymaker to help RHAK finance in-house training when new HIV/AIDS programs begin to provide services. She asks to look closely at the budget with Mr. Carin.

Together, they discover that the budget does not even take into account the full costs of the conference. It does not include rental costs for the conference facility and equipment, publication of the conference report, RHAK staff time prior to the conference, or clerical and logistical services on site. These additional costs drive the budget even higher. Looking to trim the budget, Mr. Carin and Mrs. Kiema begin to consider what costs may have been overestimated:

- They review their assumptions about the duration of the conference.
- They debate whether the conference could be held at an RHAK facility to reduce rental costs.
- Mr. Carin points out that some supplies are already on hand and need not be bought. Furthermore, not all supplies bought at this time will be used for this conference alone.
- They realize that conference materials could be produced at a lower cost if the design were less fancy.

Mr. Carin returns to the planning team realizing that the original registration fee would be insufficient to help generate funds, and in fact might not even cover costs. The team decides to prepare a new budget.

**Issues in Costing and Pricing.** Estimating costs for budgeting purposes can be a complicated task, even in this example, where it is easy to see the relationship between the actual costs of the conference and the price to be charged. Incomplete and inaccurate cost estimates can, over time, add up to a considerable discrepancy in an organization's costs and revenues, creating instability and real financing issues. Thus, if you need to develop a budget or establish fees for services (pricing), it is essential that you have available complete information on all costs, including fixed costs such as buildings and equipment, and opportunity costs such as the cost of personnel devoted to conference planning instead of their usual jobs.

Ideally, you should set prices so that all costs are covered and some money is left over (profit) for future improvements or program expansion. If the profits per service are low, you can compensate by

increasing the volume of services—until increased demand requires you to increase the size of the staff, enlarge the clinic space, or rent more equipment. However, be aware that if your services are actually sold at a loss, that loss can never be made up by increasing volume. These issues point to the importance of using detailed information from the accounting staff to get actual costs.

Setting prices cannot be based solely on costs, but requires financial and market analysis as well. The informed manager will need to analyze the market to determine what price customers are willing and able to pay. In this example, will participation really be lower if the fee is \$275 or more? If the organization sets a reasonable price and is then able to reduce the overall costs of the activity (for example, by changing the venue), it may be possible to increase profits somewhat.

### Accounting Policy and Practice

Accounting systems collect and record all of an organization's business transactions and produce thorough, accurate financial statements that are essential for making financial management decisions. Specifically, accounting documents what the organization is receiving as income and what it is spending, what the organization owns, what it owes (and to whom), and what it is owed (and by whom).

Accounting is dependent on the application of rules and standards:

- National governments, tax authorities, and the international community of accounting professionals dictate standards to ensure the ethical and appropriate use of resources. These standards help ensure that all similar transactions are treated consistently and that revenue is linked with the expenses incurred to generate it (the "matching principle"). This consistency makes it possible to compare results from year to year and, to some degree, across organizations.
- Standards known as the *Generally Accepted Accounting Principles* (GAAP) provide guidelines on how key financial information should be measured, organized, recorded, and reported. The standards of the United States and the United Kingdom are widely used throughout the world, but other standards exist as well. Many computerized accounting packages are designed to ensure that transactions are recorded in accordance with GAAP.

Every organization should develop its own policies, practices, and procedures for recording financial transactions. These should be in accordance with GAAP, meet sound business practices, and be appropriate for the complexity of the organization and skill level of the accounting and other staff members. Audits will allow the organization to determine whether these accepted standards are being followed. Organizations often hire independent audit firms to review their financial transactions in light of their own policies, as well as GAAP and other statutes, and to assess the likely accuracy of their financial statements. Audits are good business practice and may be mandated by donors or governments that provide funding.



## Understand the Role of a Financial Audit

Even if an audit finds that your organization's practices follow accepted accounting standards, this result does not guarantee the quality of your financial information. Auditors generally review the financial accounting system, but seldom analyze the efficiency of the managerial accounting system.

### Methods of Financial and Managerial Accounting

Financial accounting refers to the system used to record all financial transactions. Managerial accounting refers to the way in which costs are determined. As a manager, you and your colleagues should be familiar with both the financial and managerial accounting methods that are used in your organization.

There are two principal methods of financial accounting: cash basis and accrual basis accounting. Organizations should use the method that best fulfills their needs while meeting any statutory requirements. *For example, organizations that stock inventory for sale may be required to use accrual basis accounting.*

- **Cash basis accounting.** Cash basis accounting is the simplest accounting method. In this system, revenue is recorded when it is received and expenses are reported when bills are paid. Transactions are recorded when cash physically enters or leaves the organization, rather than when revenue was earned or when the expense was first incurred. While this method of accounting is relatively uncomplicated, it can seriously misrepresent an organization's financial position, since income may not be appropriately matched with related expenses. This accounting method creates the troubling possibility that an organization will deliberately delay paying its debts in order to appear to be more profitable, or will prepay expenses at the end of the year in order to reduce profits and evade income taxes.

- **Accrual basis accounting.** To present a truer financial position, an organization can use accrual basis accounting. In this system, revenue is recorded when it is earned and expenses are recorded as they are incurred, without regard to when the cash changes hands. *For example, if year 2001 rent is prepaid in December 2000, it is recorded as an asset but not noted in the expense accounts as yet. During each month of the year 2001, entries are recorded to reduce the prepaid account and recognize the actual rent expense.* Assets such as buildings, vehicles, or equipment are recorded in a manner that distributes the cost of the asset over its useful life ("depreciation"). *For example, if a truck is expected to be in service for five years, under the depreciation system, one-fifth of its cost would be charged as an expense each year.* The cost of major expenditures such as research and development are often similarly expensed over a period of time ("amortization").

Accrual basis accounting uses two General Ledger accounts not present in a cash system: Accounts Receivable and Accounts Payable. (Other types of prepaid accounts may also be used to provide greater detail.) These are used to recognize income and expenses as incurred. They are cleared when the revenue is actually received or a vendor invoice is actually paid. This leads to a more accurate profit and loss statement, free of the misrepresentations that are possible in the cash-only method.



Several managerial accounting methods may be used with either the cash or accrual method of financial accounting. Three methods commonly used by health and service organizations are detailed below. As an organization develops a more complex portfolio of services or revenue sources, it may benefit from one of these more sophisticated methods.

- **Cost accounting.** The cost-accounting methodology, originally developed for manufacturing, allows the full cost of a produced item to be identified in order to set profit-producing prices. In cost accounting, an item's full cost includes a share of all overhead costs (plant, equipment, support staff, and services), distributed proportionately to different "production" departments.
- **Activity-based cost accounting.** This methodology goes beyond cost accounting in an effort to accommodate service industries. Activity-based cost accounting attempts to calculate the full cost of an activity or service by allocating and attributing support costs (see box below for a description of these types of costs). *For example, the cost of a medical*

*exam would reflect the provider's time, the supplies used during the exam, a portion of the rent of the exam room; a portion of the cost of equipment usage, and a portion of the salary of the clinic manager, receptionist, and accountant.*

- **Fund accounting (also known as contract or grant accounting).** Fund accounting is appropriate for nonprofit organizations that receive funding from a variety of sources, such as donors or governments, and must meet the distinct spending restrictions and reporting requirements of each. Fund accounting allows organizations to report to different agencies without having to maintain a separate set of books for each funding source; separate books are expensive to maintain and make it difficult to look at the organization's performance in its entirety. Fund accounting is based on a chart of accounts that uses unique codes to identify the donor and/or contract for each activity (for example, contraceptives donated by IPPF would have a different code from contraceptives donated by USAID).

### Attributable and Allocable Costs

**Attributable costs.** An attributable cost can be *directly linked* to an activity or service. *For example, the cost of all supplies, staff, and equipment that are used only for gynecological exams would only be attributed to the cost of such exams, and not to pediatric exams or any other type of service.* In some cases, however, you may choose not to charge some costs directly to a specific program or activity because the accounting would be too time-consuming or costly. *For example, your program most likely needs surgical gloves for several types of services. However, it would be time-consuming to track the use of gloves by each service, and unreasonable to purchase a separate supply of gloves for each type of service, since that would cost more than buying in bulk.* Instead, your organization could attribute costs at the end of every month, using percentages that are based on well-thought-out assumptions about usage by service, such as percentage of clients using that service, total cost of service, or level of effort required.

**Allocable costs.** An allocable cost *cannot be directly linked* to an activity, yet is necessary for the activity's successful completion; an example is the accountant's work time. Costs such as clinic rent, utilities, and the support salaries of a cleaner, secretary, and general manager are all allocable costs. These are overhead costs which may be divided into two categories: 1) real, or tangible (literally, the roof overhead, including rent and utilities), and 2) labor (salaries for administrative, accounting, maintenance, and general management staff). Overhead costs are incurred for the benefit of the entire organization. These costs are allocated to all services provided at the clinic, using some reasonable basis, such as the percentage of total costs that are service costs (service costs divided by total costs x 100). Costs should be allocated in a way that is equitable, uniform, sensible, consistent, and well documented.

## Essential Financial Records

The accounting journals used for recording financial transactions are the basis for an organization's financial statements. The main records are described below and are the source of the financial reports that managers analyze and use as input for making strategic decisions.

**Chart of accounts.** The chart of accounts defines and documents how the organization's financial information will be categorized. A well-structured chart of accounts allows information to be organized and summarized according to the differing needs of program managers, the board of directors, the government, donor agencies, or auditors. All too often, financial reports are designed to meet the requirements of recipients outside the organization, even though their needs may be quite different from the organization's own needs for decision making. A flexible chart of accounts and accounting system should facilitate the generation of reports to meet the needs of all the major players.

The chart of accounts consists of a hierarchical listing of all accounts (that is, types of assets, liabilities, income, and expenses) that an organization chooses to monitor, grouped by category and subcategory. Each account is given a code number and description defined by the hierarchical structure.

*For example, the specific account for Vehicle Maintenance might have code number 10-01-01. This code would represent the category of the account (10, General Expenses), the subcategory (10-01, Transportation Expenses), and the specific account (10-01-01, Vehicle Maintenance). The code number allows data for the account to be accumulated, monitored, and reported at the level of the individual account, subcategory, or category. For example, you may need to analyze the overall monthly costs of all transportation expenses (gasoline, maintenance, and parts), but you may also want to analyze the specific monthly costs of vehicle maintenance alone.*

In defining the coding structure of your chart of accounts, strive for a balance between what information the accountant needs to satisfy statutes and standard accounting practices and what information managers need to make decisions. The accountant should collaborate with managers in the organization to create the codes. The coding structure should be detailed enough to provide you with sufficient information to make decisions, but not so complex as to make coding, recording, sorting, and reporting labor-intensive and costly. Computers make it easier to expand coding and reporting possibilities without greatly increasing costs or labor.



### Avoid Collecting Too Much Data!

Remember that it costs money and time to collect and process data—and the effort may result in too many reports with too little useful information. Determine what data are needed, for what decisions, and when they are needed, in order to decide how best to collect them. Some data necessary for financial analysis may be collected from sources other than the basic accounting system (for example, service statistics, demographics, inventory records, records of donations of goods and/or services).

**General ledger.** A general ledger is the primary financial record of an organization. All financial transactions are recorded in it, either in detail or summarized from other journals or ledgers that track specific types of transactions (such as revenue, expenses, labor costs). Transactions are recorded by date and in accordance with the chart of accounts. Traditionally, the general ledger was a very large book,

filled out with pen and ink; today, it is more likely to consist of a database and a series of computer-generated reports.

**Balance sheet.** A balance sheet focuses on the assets, liabilities, and equity of an organization, reflecting the fundamental principle of accounting (assets – [liabilities + equity] = 0). Assets generally have a debit balance and liabilities and equity have a credit balance.

### Income statement (profit and loss statement).

An income statement reports on revenue and expenses resulting from the organization's operations during a specific period. The standard format lists all sources of income, subtracts itemized expenses, and shows the net result ("bottom line"). When the bottom line shows a positive result, there is a profit from operations; a negative result indicates a loss. Often, the income statement has separate categories by department, division, or location. This helps you to determine which departments or service areas are running at a deficit, covering costs, or generating profit.

## Applying the Financial Management Tools

The budgeting and accounting tools discussed above are applied every time program and financial managers need to analyze financial information or produce and interpret managerial reports. This section opens with a sample application of financial management: cost cutting. It then describes some of the standard tools used in financial analysis.

### Cutting Costs

Managers often encounter the need for financial analysis when they are required to reduce costs. At some point, all managers face this challenge, whether because of a need to react to a funding cut, to respond to a downturn in revenues, or to free up resources for another desired goal, such as adding a new service. To make such decisions requires an understanding of fixed and variable costs, data about budgeted and actual costs, competitive pricing information, and the ability to do scenario planning.

When you are faced with the need to reduce costs, it may be helpful to consider the following strategies as you analyze your program:

- **Substitution.** Often it is possible to substitute a less expensive item for the regular product without significantly affecting the result. *For example, generic versions of drugs may be substituted for the name brand—often at a significant price saving—without affecting the quality of the product.*

- **Economies of scale.** In many cases, expanding the size of an activity will not significantly increase the fixed costs. The result is a lower cost per unit. *For example, if a clinic increases its client base without hiring new staff members or opening a new facility, it might serve 7,000 patients at a lower cost per client than 5,000 clients.*
- **Cost sharing.** Combining different activities that use the same resources can allow costs to be shared. *For example, an off-site staff meeting can be combined with a technical training activity, allowing the travel costs and many of the supply costs to be shared between the two activities.*
- **Bulk purchasing.** Buying frequently used items in bulk is a common way to reduce per-item costs. *For example, one notebook might cost \$1.00, but a box of 20 might sell for \$10.00 (\$0.50 per notebook).* Note, however, that it is generally not cost-effective to buy large quantities of infrequently used items, since spoilage, loss, or storage costs may lead to a higher overall cost.
- **Reducing idle capacity.** Examining the utilization of staff can help you identify ways to reduce idle capacity. *For example, a part-time secretary might be laid off and the work redistributed to other staff members.* Alternately, quiet times might be used for new purposes so that the organization has more output for the same money. *For example, if a receptionist who greets guests and answers the phone often has free time during her workday, that time might be used for secretarial or administrative tasks, thereby increasing her output...(Note: If her job were changed significantly, her wages might need to change to reflect the new responsibilities.)*

In the following box, Mr. Carin and Mrs. Kiema consider these strategies in an effort to reduce the costs of the runaway training.

## Cost-Reduction Strategies in Practice

### The Case of the Runaway Training: Part II

The conference planning team has incorporated the line items identified by Mrs. Kiema and has produced a revised budget. Mr. Carin meets again with Mrs. Kiema to review the new budget and assumptions:

|   |                 |   |
|---|-----------------|---|
| Travel:                                   | \$2500          |   |
| Per Diem:                                 | 7500            |   |
| Conference Materials:                     | 600             | (reduced to reflect materials on hand)                              |
| Office Supplies:                          | 100             | (reduced to reflect materials on hand and possible left-over stock) |
| Phone and Postage:                        | 300             |   |
| Honoraria:                                | 1000            |   |
| Conference Facility and Equipment Rental: | 750             |   |
| Conference Report:                        | 500             |   |
| RHAK Staff Time:                          | 656             | (15 days at an average rate of \$35 per day plus 25% overhead)      |
| <b>Total Budget:</b>                      | <b>\$13,906</b> |   |

Proposed Registration Fee: \$309 (\$13,906/45 participants)

Mr. Carin and Mrs. Kiema agree that the RHAK staff needed the 15 days budgeted for their effort if they are to provide the clerical and logistical support for the conference. However, they note that the revised budget and the proposed registration fee are too high—higher even than the original. They ask the planning team to consider some cost-reduction strategies:

- **Substitution.** Can the venue be changed to a more economical location requiring less travel?
- **Economies of scale.** Given the number of participants, can discounted meal plans be negotiated with the conference facility to reduce the cost of per diem?
- **Cost sharing.** Can presenters be convinced to participate without receiving an honorarium, as the conference provides a high level of exposure?

The planning team determines that the honoraria are a necessity, so cost sharing is not possible. By changing the venue from a resort to a conference center outside the capital, the planning team manages to negotiate a very favorable lodging and full accommodation package rate. As a result, the total Travel and Per Diem costs are reduced to \$4500, bringing the total conference budget to \$8,406. Mr. Carin suggests adding 10% to this amount for unanticipated costs, for a final budget of \$9,247.

The registration fee is set at \$205, a price Mrs. Kiema believes will encourage participation. The team develops a plan for budget monitoring and Mr. Carin is made accountable for staying within the budget.

This scenario illustrates, on a small scale, common financial management issues: budgeting, pricing for affordability, costing and cost reduction, and financial management. As such, though the example focuses on only one activity, its principles can be applied across service types and for whole programs of an organization.

### Analyzing Financial Information

Whether your management responsibilities require you to cut costs, as in the example above, or to make other finance-related decisions, you must know how to interpret financial statements, analyze results, and recognize whether a report discloses all costs fully. Financial analysis is an important process to help you determine the efficiency, effectiveness, and stability of your organization:

- **Fiscal efficiency** reflects how economically funds are being used. Measures of efficiency include return on investment and cost per unit of service.
- **Fiscal effectiveness** reflects how funds help the organization meet its mission and goals.
- **Fiscal stability** reflects how capable an organization is of meeting its obligations and paying its staff, how consistent its sources of revenue are, and whether revenues keep pace with expenses.

To measure these three characteristics of an organization, financial analysis uses indicators, which are often in the form of ratios. Examples of some key ratios and the reports from which they are derived appear in the following table.

| Financial Management Indicators  |   |  |   |
|--|---|--|---|
| Ratio  | Purpose   | Formula  | Source of Data                                    |
| Debt/equity ratio  | To assess the organization's solvency                           | Long-term liability ÷ Equity                         | Balance sheet                                     |
| Cash flow/debt ratio   | To assess both solvency and risk                                | Cash flow generated by operations ÷ Total debt       | Balance sheet                                     |
| Quick ratio  | To assess the organization's liquidity                          | Cash and cash equivalents ÷ Current liabilities      | Balance sheet                                     |
| Current ratio  | To assess an organization's ability to meet current obligations | Current assets ÷ Current liabilities                 | Balance sheet                                     |
| Growth   | To assess growth in revenues                                    | (Sales year II – Sales year I) ÷ Sales year I        | Income statement                                  |
| Cost per unit of service   | To assess program efficiency                                    | Total program costs ÷ Total number of clients served | Income statement combined with service statistics |
| As evident in the growth ratio, which is based on sales in two different years, ratios should be compared against prior reporting periods whenever possible. They should also be compared to the standards or usual performance of other agencies, if available. |   |  |   |



Any time you do a financial analysis, you should meet with other program and financial managers to discuss your findings. The discussion should use the results of your analysis as a basis for identifying strategies for increasing the financial sustainability of

the organization, decreasing the inefficiencies of specific programs, decreasing overall costs and/or increasing cost effectiveness, setting prices, and allocating resources, as discussed later in this issue.



### **Don't Jump to Conclusions!**

Ratios can only provide clues that things are going well or that a problem exists. Where ratios indicate a possible problem, such as excess debt, insufficient cash balances, or poor growth, you need to gather more information and uncover the underlying causes of the problem before taking appropriate action to remedy the situation.

### **Financial and Managerial Reports**

The process of financial analysis is based on the budgeting and accounting reports generated at the first level of the pyramid (see model on page 7) and leads to the creation of managerial reports that feed into the organization's overall strategic decision making. Consequently, the quality of the reports at all levels is critical. Be sure that the financial statements produced by your accounting system illustrate, rather than obscure, the fiscal position of the organization. Well-designed financial and managerial reports should tell a story about the organization's performance, making it easier for managers to interpret financial results on their own. Also, be sure that the reports are distributed to managers who understand how to interpret them, have the authority to make operational decisions, and will read them promptly so as to implement any needed interventions in a timely manner.

Some essential reports and analysis tools used in financial management are listed on the next page. In all cases, remember that:

- All reports should include the date prepared, the period covered, and descriptive labels and titles that are comprehensible to the general reader, as opposed to codes used only within the accounting department.
- Reports should be produced annually, at a minimum; often they are generated quarterly or monthly. Frequent reports are more useful as management tools because they are based on more current data and they provide more opportunities to react to changes.
- To compare reports over time, the reporting periods should be consistent. It would not be appropriate to compare a statement prepared on November 1, 1999 with one prepared on December 31, 2000. Instead, compare the report prepared on December 31, 1999 with the December 31, 2000 report.

## Essential Financial Analysis Tools and Reports

**Budget.** The budget is more than a financial plan showing expected future income and expenses. Once created, the budget becomes a tool to monitor current operating conditions. Reviewing and reacting quickly to variances between expected and actual expenses allows you to take corrective action before too much money or other resources are lost. (Budgets are described in more detail beginning on page 8.)

**Variance analysis.** A variance analysis documents and examines the difference between planned and actual results. There are three main areas of variance analysis: comparison of the budgeted cost with the actual cost (expenses), comparison of the planned quantity of an activity or purchase with the actual quantity, and comparison of the planned output with the actual output.



**Burn rate analysis.** A burn rate analysis documents the total amount of money spent over a given period of time (in a certain department, for a specific activity, or for the whole organization). This analysis is repeated on a routine basis (monthly, quarterly, etc.), in order to identify trends in spending and to develop hypotheses about why these trends occur. It is helpful to graph the amounts of money spent so that you can monitor spending patterns, which can be seen better on a graph than in columns or tables. A burn rate analysis can help you pose questions about spending patterns and cash-flow needs, make decisions that influence these trends, select activities requiring action, and determine what is working, what is not, and why.

**Cash flow statement.** A cash flow statement reflects the inflow and outflow of cash in an organization. It reports on several categories: cash flow from operating activities, cash flow from investing activities, and cash flow from financial activities. It is a critical report, since it helps managers assess whether there will be sufficient cash on hand to meet expenditure needs.



Even an organization that has many assets and a strong balance sheet can find itself in trouble if cash is not available when expenses are incurred. For example, if many of the assets consist of equipment, buildings, or long-term receivables, they cannot (and likely, should not) be readily converted to cash to meet immediate expenses.

**Income statement (profit and loss statement).** The organization's income statement, described on page 16, can be a useful tool for analysis when enhanced to include comparative information, such as budget to actual variances or the percentage of change between reporting periods. *For example, the income statement may show that supply costs for the year are \$12,500. This information becomes more powerful when the report also shows that this amount is \$4,000 over budget and 25% higher than the same time last year.* This rich information should prompt the manager to investigate possible causes, such as rising costs of the variance, a one-time event, wasteful usage, or theft.

**Balance sheet.** The organization's balance sheet, described on page 15, is the source for many of the key ratios used in financial analysis.

---

## Using Financial Information to Make Management Decisions

In this issue, we have discussed the building blocks for sound financial management, as illustrated in the pyramid model. The first level—tools—specifically budgeting, accounting, and financial records, are critical as a foundation. The second level—applications—financial analysis and reporting, are processes and functions necessary to make efficient use of the financial tools. At the third and final level, financial data and analysis feed into the organization's overall management in support of sound decision making.

This stage is critical, for all decisions made in health organizations have financial components that must be based on good financial information and careful analysis. Should we open a new branch? How many hours per week can we afford to operate our health clinic? How productive is our medical staff? How much money are we losing on expired stock? What is our cost per contraceptive user? How cost-effective was the training intervention? Can we sustain our services at current costs? These decisions—all of which require financial and managerial input—can be grouped into categories as described below.

### **Determining labor and staffing patterns.**

Financial data such as hours worked and the costs of staff time can help you make decisions about labor, staffing, and compensation issues. For instance, you can analyze good financial data to learn how overtime (premium) pay and leave-time accrual are affecting labor prices. In response, you can manage or restrict overtime or you can limit leave-time accrual. The financial analysis can indicate which activities are most labor-intensive, which may spark your thinking on ways to streamline management processes and control the level of effort of your staff.

**Setting fees for services and other prices.** Data from the financial system help you determine how much it costs to provide services, which is critical for many management decisions: developing budgets,

setting prices for any products or services for which your organization charge, bidding on new business, or reducing costs. Once you know your organization's cost per service, you can consider other factors in order to decide how to offset these costs. *For example, you might consider charging fees for services or else subsidizing less-profitable services with the revenue generated from services that have other forms of support.*

**Defining the mix of services.** To decide which services to provide, promote, emphasize, or subsidize, you need financial data such as the cost (per unit of production, per unit sold) of different services and their cost-effectiveness. You also need to have information on the catchment population, clientele, service volume, and service utilization. By examining the services that are infrequently used or often lose money, you can consider how best to make appropriate changes.

### **Projecting future inventory and supply costs.**

Financial analysis provides you with information about consumption patterns, price fluctuations, and the costs of keeping supplies in stock, which include transportation, personnel, logistics, and facilities management. You can use the information for decisions such as which vendors to select, which arrangements to renegotiate, and whether to purchase stock on a seasonal basis in order to take advantage of price differences throughout the year. You can also determine whether the costs of spoiled and expired stock need to be contained.

**Developing new business.** You need financial data on historical costs in order to calculate the costs of developing new projects or services, including costs related to proposal development and fundraising. Accurate budgeting is essential for the success of any new business proposal. As you develop a proposal for new work, you may decide to undertake the new activity even if it does not cover costs, as it will attract other business or funding.

**Managing risk.** You can help manage risky situations by monitoring the financial status of your organization carefully. Many situations have the potential to harm the organization. *For example, an unexpected rent increase or a major cut in donor funding may leave your organization without sufficient funds to provide services and meet objectives.* Thus, managing risk—the potential occurrence of an unwelcome, costly outcome—is an important part of every manager’s job. You must attempt both to assess potential risk and to prevent or control risky situations such as failure to meet performance, quality, or budget objectives. Risk management depends on financial data to help quantify the risks by resource type: human, inventory, facility, cash, or receivables.

Financial managers use two methods for coping with risk: mitigation and contingency planning. Risk mitigation establishes policies and procedures to prevent, control, or lessen the impact of the risk event, if it occurs. Contingency planning involves preparing alternate plans that can be implemented if a risk event occurs. *For example, if there is a risk that donor funding will be cut, a mitigation technique would be to broaden the donor base so that a cut in funding from one donor will not be as detrimental. A contingency plan would be to build up a reserve fund that could be used to supplement the budget if donor funds are cut.*



### Use Available Tools to Analyze Costs

There are many ways to determine the true costs of providing a service, running a program, or staying in business. Spreadsheet tools can be very helpful in analyzing cost data. Many organizations design their own spreadsheets; however, setting up the sometimes complicated formulas, developing a good design, and testing the spreadsheet with sensitive data can be a lengthy process. It may be preferable to use an existing spreadsheet tool designed for this specific purpose. One such tool is *CORE—A Tool for Cost and Revenue Analysis*, developed by Management Sciences for Health. CORE is designed to help health and family planning managers improve the efficiency and financial viability of their services by analyzing and comparing the current and projected costs and revenues for each service within a facility, as well as among facilities within the same organization. The comprehensive *User’s Guide* and diskette containing three electronic spreadsheets are available in English, Spanish, and French. For more information, see the MSH web site at <http://www.msh.org/publications>. To order CORE, send an e-mail to the MSH Bookstore at [bookstore@msh.org](mailto:bookstore@msh.org) with your request.

It is essential to recognize that all the types of decisions listed here require analyzing both financial and management information and should involve both financial and program managers. The final installment of the Case of the Runaway Training provides an illustration

of one such decision. In part III of the case, the program and financial managers use the financial and other information at hand to decide whether or not to accept responsibility for HIV/AIDS training in future.

## Making Decisions with Financial Information in Practice

### The Case of the Runaway Training: Part III

Shortly after the conference ends successfully, Mrs. Kiema calls a meeting of the conference planning team. She asks the team to evaluate whether RHAK should accept ongoing responsibility for these activities, as requested by the Ministry.

The conference team begins by noting that the conference was productive, was evaluated highly by participants, and received good feedback from the Ministry. Thirty-nine of the 45 external invitees attended, and seven representatives from RHAK participated and managed logistics on site. Twenty participants paid their fees in advance and 12 paid during registration, for total receipts to date of \$6560. Letters have been sent to the remaining seven participants reminding them of this obligation.

The actual costs recorded were as follows:

|   | <b>Budget</b> | <b>Actual</b> |
|---|---------------|---------------|
| Travel:   | \$1500        | \$1330        |
| Lodging and Meals:                                | 3000          | 3000          |
| Conference Materials:                             | 600           | 523           |
| Office Supplies:                                  | 100           | 50            |
| Phone and Postage:                                | 300           | 350           |
| Honoraria:  | 1000          | 1000          |
| Conference Facility and Rentals:                  | 750           | 550           |
| Conference Report:                                | 500           | 355           |
| RHAK Staff Time (Direct and Indirect Labor Costs) | 656           | 438           |
| 10% Contingency:                                  | 841           | 0             |
| <b>Total:</b>                                     | <b>\$9247</b> | <b>\$7596</b> |
| Expected Revenue:                                 | \$9225        | \$6560*       |

\*Expected revenue will be \$7995 (\$205/person x 39 participants) if all fees are collected, which means that RHAK will generate \$399 in funds to support its future training events.

The planning team considers the actual costs of this first conference:

- Travel costs were less than expected, but only because there were fewer participants and travel was refundable.
- When the expected number of participants did not register, there was no way to reduce the lodging and meals charges negotiated with the conference center, since these costs were fixed based on the expected 39 participants. Thus, RHAK sent additional staff members to fill in the number of participants, since they were already paying for the participant costs anyway.
- It took less staff time than expected to plan and conduct the conference; however, the actual staff time does not reflect the fact that additional staff members attended when paid-for rooms became available.



- It may be possible to reduce the costs in staff time for future training activities, since some of the logistics planning work has been completed (such as the search for an affordable conference center).
- Postage costs have already increased and may continue to grow because of the unanticipated collection costs.
- If the remaining fees are collected, RHAK will succeed in covering costs—but with little margin for reinvestment.

Mrs. Kiema reminds the planning team of the political opportunity and the advantages of being the Ministry's training partner. In this light, the team members discuss whether RHAK should continue hosting these conferences even if they only break even on the costs. They point out that this new line of business was part of RHAK's strategic plan even before the Ministry opportunity arose. Given RHAK's commitment to integrating HIV/AIDS into their service portfolio, leading the implementation may be to the advantage of both RHAK and its clients.

The team does not arrive at a final decision but does agree to consider the following strategies:

- Increase the registration fee to adjust for possible last minute no-shows.
- Ask the Ministry to guarantee a minimal level of participation (i.e., the Ministry will pay for a portion of no-shows).
- Require the registration fee to be paid in advance and continue to negotiate with the conference center for adjustments based on final counts of participants.
- Conduct trainings regionally to minimize travel costs.
- Ensure that RHAK staff members benefit from any empty slots in training conferences, since they must be trained in any case.

This example is quite simple, yet it demonstrates how financial information and analysis can support the organization's strategic decision making and planning. Your own management responsibilities may be similar to this one or may require more complicated decisions and analyses—however, the principles and tools are the same. What is important is to recognize that opportunities must be maximized and risks managed; you can use historical financial information to estimate their costs and can analyze current information to quantify their impact.

## Improving Your Financial Management System

Most organizations have some type of financial management system in place—at a minimum, an

accounting system. However, the system may not be the most effective way to collect, record, or report on the organization's financial situation. You need to be sure that your organization's system provides you with information that helps you make sound decisions about how to use your organization's resources and that contributes to decisions about improving services.

Improving your financial management system cannot be done without first asking many questions about how your organization's financial goals link to its strategic goals, about the effectiveness and efficiency of your existing financial systems, and about staff knowledge and practices related to financial management. The following box lists important considerations for the continuing evolution of appropriate and effective financial management systems.

## **Improve Your Financial Management System**

As the model of the pyramid demonstrates, financial management is founded on basic tools, requires the application of those tools, and uses those applications in support of management decisions. Issues can arise at any of these three levels. If you are dissatisfied with the ability to use financial information or make decisions in your organization, or if your organization is about to undertake new business or develop new services, you should consider improving your existing system.

Improving an existing financial management system requires close collaboration with staff members, careful sequencing of improvements, and close monitoring of plans. Many organizations find it helpful to hire a local consultant or financial consulting firm to facilitate the process. Such external assistance can often provide objectivity, a fresh perspective, expertise in system design, knowledge of existing systems and software programs, and experience gained in other organizations. While this assistance requires additional funding the results may be worthwhile. In the long run, you may decide that your organization would benefit from a greater level of computerization or the acquisition of software. A detailed approach to automating your accounting system is outlined in the supplement to this issue.

### **The Foundation: Financial Tools**

Begin by orienting all staff members to the importance of financial management, the need for an effective system, the process that will be used to improve the system, the timeline for completing the process, and what will be required of different types of staff during the design, testing, and implementation phases. It is necessary to provide training for staff members relevant to their expected needs, in how to read financial information and why financial management is relevant to individual roles. Be sure staff members use common definitions for budgeting, accounting, and financial data. Examine both the information currently available and the level of access to that information throughout the organization.

Review budgeting techniques and practices. Undertake a review of the organization's accounting system to ensure that it meets current and projected business needs and is of the right size and complexity. Consider whether the chart of accounts adequately reflects the business. Is coding sufficient and meaningful to support analysis and reporting needs? This review of budgeting tools, accounting, and existing information may reveal needs for training, new or different skills for staff members, and may even trigger the need for a major change in accounting practice.

### **Applications: Financial Analysis and Reports**

Assess the financial management needs of all users (internal and external) and examine the existing financial management systems. Talk to the managers of all departments in order to determine the answers to such questions as the following:

- What financial information does the organization need? (What information is currently used, for what management purposes, where in the organization, and with what frequency?) To what extent is the current information adequate?
- What kinds of analysis do we do, what kinds don't we do, and why?
- What are our organization's internal and external reporting needs?
- What aspects of the current system work well? What aspects need improvement?
- What technology is available and practical for enhancing the supply of information?

As part of the assessment, collect and assess the standard financial and managerial reports. Discuss the purposes for which each report is used. Consider whether the format of the reports facilitates accurate recording and analysis. Determine whether the data are of good quality: accurate, relevant, and timely.

This is a good time to review and discuss organizational culture in relation to financial information and information sharing in general. If there are long-standing blocks to the flow of information, either because of individual personalities or as a result of unclear roles, identify and address the problems. It is sometimes useful for key staff members to practice new ways of operating through case studies or in-service training using hypothetical situations. The application of financial analysis requires tools, skill, interest, and an attitude that validates the financial perspective as a critical input to decision making. This attitude requires the support and modeling of the organization's leaders. At this point, every organization must decide who should have access to what information, how information will routinely flow, and who is accountable for financial performance.

Review and improve as necessary the reporting processes and forms. Review both internal and external reports, being sure to identify the source for all information needed (particularly any new data items), and set a schedule for report production. The key is to ensure that the information needed to make decisions is available at the appropriate level when needed and that it includes sufficient detail.

Identify any complementary processes that would be useful in managing or analyzing the information, such as historical cost information, prior-period planning, or projections. Design spreadsheets, other tools, and data-collection methods that will enhance the basic information your accounting and budgeting system provides.

### **Financial Management and Decision Making**

Once you have improved the design of your budgeting and accounting tools and made your analytic processes and reports more relevant to your business, they will add value to strategic management and decision making. At the strategy level, success in financial management depends on clear roles and authority and on a critical factor: the organizational culture.

Your organization's leaders must demonstrate that they believe financial performance is important to achieving the organizational mission. In traditional for-profit settings, financial performance is valued highly, but many nonprofit health organizations struggle to integrate sound financial management practices with program goals. It is important for all staff members to understand the relationship between financial performance and access to quality services. The poorly managed, financially unsound organization will not be able to sustain or expand services. Conversely, the organization that uses sound financial management to influence decisions will be able to invest in future programming. While oversimplified, this is the perspective that is prevalent in organizations that embrace financial management to support program objectives.

Be sure to review regularly how well financial goals and management practice are incorporated throughout the organization. Managers will only continue to use financial data if there is a continuing and clear message from leadership that financial management is important and data are accurate, reliable, timely, and readily available. Organizations should implement a monitoring plan to regularly review the design and utility of the financial management system.

Despite the importance of financial management, many managers avoid using or improving their organization's financial system. They may see it as too difficult, costly, or time-consuming a task; they may not sufficiently trust their financial staff's ability

to lead; or they may feel that the existing system is good enough. If you find there are obstacles, real or perceived, to improving the financial systems in your organization, consider using the strategies suggested in the following box.

| Preventing and Overcoming Obstacles to Improving Financial Management Systems   |   |
|---|---|
| Obstacle  | Strategy  |
| <ul style="list-style-type: none"> <li>• Staff members may be afraid of losing their jobs if accounting activities are computerized or streamlined.</li> <li>• Staff members may fear the shift in authority, responsibility, and accountability that may accompany improvements to the financial management system.</li> <li>• Program staff members may be uncomfortable working with financial information.</li> <li>• Program staff members believe that financial staff members create unnecessary barriers to operation, and financial staff members believe that program staff members are not fiscally responsible managers.</li> <li>• Program staff members may feel that committing time, money, and people to enhancing financial management systems takes scarce resources away from program activities and meeting client needs.</li> <li>• The organization may have a history of adequate funding so employees believe it can survive without strong financial management.</li> </ul> | <ul style="list-style-type: none"> <li>• Discuss openly with the staff the kinds of new skills that improved financial management systems will require and what training is available. Also discuss new opportunities that could be pursued once the time dedicated to routine tasks is reduced. Review staff skills regularly and invest in training to keep skill levels appropriate.</li> <li>• Stress that the shift in responsibility focuses on those in the best position to influence processes and outcomes. Accountability for financial outcomes such as budget control or meeting cost-recovery projections must be clearly defined and accepted.</li> <li>• Provide training on how to interpret and analyze financial reports. Help program staff members understand how a good system will make it easier for them to understand and work with financial information.</li> <li>• Create integrated work groups with clearly defined roles and responsibilities so that the financial staff feels committed to program outcomes and the program staff feels accountable for financial outcomes.</li> <li>• Help all staff members understand the importance of being financial managers. Explain that the goal is to improve efficiency and use resources responsibly. Improved financial management might actually lead to safeguarding resources or identifying new sources of revenue that can be used to expand services.</li> <li>• Stress that it is important to operate a sound business even when resources are not scarce. In fact, it is much easier to put good systems in place when funding is not a constant concern.</li> </ul> |

---

## Taking a Comprehensive Approach to Financial Management

This issue has focused on explaining how critical financial management is to making good management decisions. Because financial management affects all parts of an organization, the issue emphasizes that staff members at all levels need to understand and appreciate financial management and know how to use sound financial information.

The issue also highlights strategies and tools that support the use of financial information for analysis and decision making. Now we can apply some of these to the second scenario presented at the beginning of this issue:

► *Scenario: The manager of the national child survival program received news from the Ministry of Health that the program budget would be cut by 20%. The manager hoped to make up the difference without cutting services. What tools or techniques might be used to help achieve a 20% reduction in costs?*

► *Options: This issue has presented several ways that this manager could attempt to achieve a 20% reduction in her budget. They include:*

- Using cost-cutting strategies such as substitution, economies of scale, cost sharing,

bulk purchasing, or reducing idle capacity to try and minimize the effects of this cut.

- Analyzing costs and revenues closely using a tool such as CORE to determine how best to set prices or implement a fee-for-service plan.
- Applying ratios and other analysis tools to examine the efficiency of different services. Such analysis may ultimately lead to the decision to cut an inefficient or costly program in order to safeguard the services that are most valued by the clients.

The issue also describes the broad steps necessary to improve your organization's financial management system. As you work to improve your system, be aware that the problems revealed through financial analysis may be rooted in other management areas: human resource management, project or program management, the organization's leadership, or the availability and use of technology. For this reason, always take a comprehensive approach to improving the financial management system. Review your organization's management strategies, structures, resources, capabilities, and internal and external information needs. This broad review will widen your perspective on how financial management contributes to your organization. You will be more able to appropriately design or modify the chart of accounts; improve financial forms, reports, and databases; and train staff members to effectively use financial information on a regular basis.



### **Identified Need for an Improved Financial Management System Leads to Organizational Reflection and Change**

[This example illustrates a situation in which an effort to improve the financial system began with a narrow focus on computerization and resulted in broad improvements to the accounting system, chart of accounts, financial management reports, staff skill levels, and role definition.]

During 1998 and 1999, the National Family Planning Board (NFPB) of Jamaica was working toward implementing a new, computerized financial management system. The process met with some significant obstacles and delays, but the Board's strong commitment to a computerized financial management system kept the process moving forward.

#### **The Need for a New System**

Prior to 1998, financial accounting at the NFPB required a very high level of effort. Critical reports were late and frequently inaccurate, which led to many complaints from both the Ministry and the audit firm. There was a single accounting officer who worked full-time on bank reconciliations and financial statements; preparing these reports routinely took a full month. The NFPB was severely under-equipped in both computer hardware and staff computer skills. To address this situation, new computer equipment was donated by USAID and the staff was trained in-house by the Academy for Educational Development, a US-based training organization. However, even with new computer skills, the organization still needed to build the capacity to convert to a more effective financial system.

#### **Procuring a System**

While working on procuring software, the NFPB realized that much internal work needed to be done in order to implement a new accounting and financial information system. To begin, staff members defined and streamlined policies and procedures. They considered the division of roles and responsibilities, the requirements in terms of system operations, and their reporting needs. Subsequently, they were able to select a software solution and vendor and to set a schedule for implementation, with the assistance of consultants from MSH.

#### **Unexpected Results**

The NFPB encountered many obstacles, both external and internal, to finalizing this process. One external force was pressure from the Ministry of Health and the public to bring financial statements and reporting up-to-date immediately. Attention had to be redirected from implementation to satisfying this pressing need. Internal pressure, catalyzed by the demands from external clients and the stress associated with any system change, resulted in the following:

- a change in leadership, as a new deputy director assumed responsibility for the finance system project. Internal resistance to this change slowed the process for a while;
- minor problems in configuring the hardware and a need for small software "add-ons," caused by the delays;
- delays between training and implementation, as the organization satisfied external demands to bring financial statements up-to-date.

As a result of addressing these issues and changes, the NFPB now has a more thorough knowledge of its systems and more accurate financial records.

## **Accomplishments to Date and Contributing Factors**

The NFPB has realized a number of benefits as a result of its efforts to improve its financial management system:

- Financial statements are now up-to-date.
- The process was used as an opportunity to revise the NFPB's chart of accounts.
- Reporting needs have been clarified and reporting forms improved.
- Staff members have become more aware of the importance of financial management.
- Staff members have increased their computer skills.

The success to date has convinced the NFPB that the project will be completed and will provide the organization with an important tool. The factors that contributed to its success include:

- committed and financially knowledgeable leadership;
- a good relationship with a competent vendor;
- a careful and comprehensive selection process for a system that meets clearly defined management needs;
- increased staff understanding of how financial information is used and who needs it;
- regular progress meetings where tasks are assigned and completed tasks are checked off.

## **Next Steps**

As the NFPB nears the end of the implementation phase, it has to make some critical decisions:

- Will it run parallel financial systems and if so, for how long?
- Will all financial data for the current fiscal year be loaded into the system?
- How will the systems be introduced to the rest of the organization?
- What training will be provided to staff on interpreting new reports, requesting information, and using newly available information for decision making?
- How will the NFPB fund and ensure continued maintenance and support of the system?
- How will existing policies and procedures be affected by the new system?

## **Lessons Learned**

While the process has had some unexpected twists and turns, this unpredictability is not unusual. Despite the external demands for immediate changes to the reporting system, NFPB persevered and benefited from conducting a critical evaluation of its internal systems as part of the process of selecting a new system. Their experience reinforces the importance of being prepared for the unexpected when converting a financial system, and of recognizing and addressing obstacles when they occur, instead of ignoring them.

## Glossary of Financial Management Terms

**accounts payable:** Money that your organization owes, corresponding to bills or invoices already received.

**accounts receivable:** Money that is owed to your organization, corresponding to bills or invoices that your organization has already sent out.

**amortization:** The accounting practice of writing off intangible assets such as goodwill, trademarks, and patents by crediting their value to an asset account.

**assets:** The cash, property, inventory, and equipment owned by an organization or due from others, such as clients. Assets are often divided into three categories: current, long-term, and fixed. Current assets are cash and other liquid assets that can be converted to cash in one year or less, such as accounts receivable. Long-term assets require more than one year to convert to cash. Fixed assets are property intended to be held for a long time, such as land, buildings, and equipment.

**controls (financial or internal):** All procedures and policies that guard against errors, corruption, theft, and misuse or inappropriate use of funds and other resources. Controls usually consist of prior approval of expenditures, cash control, and accurate documentation of costs, including the time of employees.

**costs, fixed:** Costs that do not vary according to the level of activity or volume of services delivered. Fixed costs are incurred regularly and do not vary (or vary only slightly) from one time to the next. Examples include rent, utilities, equipment leases, and general salaries.

**costs, direct:** Costs that are incurred specifically for a given project or activity, that would not be incurred without that activity, and that can be fully attributed to that activity.

**costs, indirect:** Costs that are necessary to the overall operation of the organization and therefore affect all programs and can be allocated to them. Such costs do not have an exclusive relationship to one specific activity or program.

**costs, variable:** Costs that vary according to the level of service provided or number of people served, such as the cost of medicines or supplies used in providing services.

**credit:** A negative number used to record increases in liabilities, equity, or income, and decreases in assets and expenses.

**debit:** A positive number used to record increases in assets or expenses, and decreases in liabilities and equity.

**depreciation:** The accounting practice that spreads the cost of a fixed asset such as a computer or a vehicle over the asset's anticipated useful life. (The asset may lose its usefulness as a result of physical wear or obsolescence.) Depreciation may be in the form of an accounting transaction or may be "funded" by systematically depositing cash in a special fund for asset replacement.

**equity (reserve):** The net worth of the organization, calculated by subtracting the value of liabilities from the value of assets.

**expenses:** The cost of doing business, including supplies, wages, and purchased services. In an accrual system of accounting, an expense is recorded in the accounting system when it is incurred; in a cash system of accounting, the expense is reported when the cash is actually disbursed to pay the bill.

**fringe benefits:** Employee benefits that are in accordance with local labor laws and an organization's usual policy and practice. These might include holiday, sick and vacation leave, social security insurance, housing allowance, pensions, and medical and life insurance.

**income:** Money earned from services or sales or received from outside sources, including donors.

**indirect cost pool:** The money budgeted to cover operating costs that are shared by more than one activity or department in an organization, such as building maintenance and utility expenses.

**liabilities:** Debts owed to outsiders, including banks, investors, and vendors, both short term (due in one year or less) and long term (due in more than one year).

**loss leader:** An activity carried out at a financial loss but treated as an investment in order to leverage additional business, despite the fact that the current costs will not be fully recovered.

**net profit/net loss:** The difference between total income and total expenses.

**net value:** In for-profit organizations, the income made by the organization after all expenses have been accounted. This income is considered profit and is distributed to the owners. In nonprofit organizations, it is called a reserve or a surplus and is used to expand or improve programs.

**segregation of duties:** The allocation of work tasks so that no individual controls all phases of any financial transaction. *For example: The person who writes checks should not be allowed to sign them or reconcile the bank account. A single employee should not be allowed to request, approve, and disburse a single expense. The person who calculates the payroll should not be allowed also to sign and distribute the paychecks.* Such a system guards against error and fraud.

## References

- Mullis, Darrel and Judith Handler Orloff. *The Accounting Game: Basic Accounting Fresh from the Lemonade Stand*. Sourcebooks, Inc., 1998.
- Verzuh, Eric. *The Fast Forward MBA in Project Management*. New York: John Wiley & Sons, Inc., 1999.
- Wolff, James, Linda Suttentfield, and Susanna Binzen, eds. *The Family Planning Manager's Handbook: Basic Skills and Tools for Managing Family Planning Programs*. West Hartford, CT: Kumarian Press, 1991.

## Reviewers' Corner

*A forum for discussing additional applications  
of the concepts and techniques presented in this issue*

**On the types of decisions that can benefit from financial information...***Reviewers suggest additional decisions requiring financial information:* “[Consider] establishing partnerships with other institutions in order to share assets from both. This can improve efficiency and reduce costs.” “[Measure] sustainability: How many people are benefiting from our services, at what cost, and can we sustain our services at current costs?”

**On experiences in using financial information...***One reviewer reflects,* “I am on the board of a large local NGO that wanted to build a clinic with beds for inpatient care. A large amount of money was required, so we did a financial analysis. The analysis showed that this decision would increase revenues for the NGO.” *Another recalls,* “For years we relied on IPPF for 95% of our funding. Then we started collecting financial information on national sources of funding fee-for-service, commodity sales, and in-kind contribution and donor project implementation. With good financial information, IPPF funding was reduced to about 60% in a few years. Also, we used financial information to establish the unit cost for our services and commodities. The impact was profound. We have increased our understanding of our business and our motivation to provide good services.”

**On financial pitfalls...***A reviewer warns that improving the information system may not be enough,* “Be aware of poor record-keeping, poor supervision and communication, and staff members’ lack of knowledge of financial management.”

**On the benefits of improving financial management...***The manager of a national family planning organization says,* “With a functional accounting and financial management system, I will be better able to manage and allocate resources to meet program goals. I will be able to do rapid assessments of financial problems and be responsive to program requests for funding. By having standard reports, I will reduce the level of effort that my colleagues and I currently spend on the simplest analyses. Once I have timely financial information, I will be able to delegate responsibility to program managers for the management of their own budgets, [while also] freeing myself for more organization-wide needs. Ultimately, good financial systems mean more resources available for services to our clients.”





## Checklist for Understanding and Using Financial Management Systems to Make Decisions

- ☐ Familiarize yourself with financial management terms. Work with your accounting staff to understand how your managerial actions affect the organization's financial workings and how the financial workings affect you.
- ☐ Build a financial management system that is effective at collecting, recording, and reporting on the organization's financial situation. Be sure it provides information in a form that helps financial and program managers make decisions about allocating resources.
  - Decide what financial information you need for both internal and external purposes. Work with your accounting staff to develop reports that allow you to examine the organization's financial performance and to make decisions when needed.
  - Determine the accounting method (cash basis accounting, accrual basis accounting, etc.) that will best meet your needs and represent the organization's financial position.
  - Decide carefully what methods to use to collect cost information. Use an allocation method that is equitable, uniform, sensible, and consistent, and document it well.
- ☐ Ensure that all staff members analyze and use financial information in their management decisions.
  - Use financial management tools to make judgments about your organization's efficiency, effectiveness, and stability.
  - Use financial information to seek ways to make the most efficient use of limited resources to achieve the goals and carry out the strategic plans of your organization.
- ☐ Establish a realistic and detailed operating budget. Use it to make planning and operating decisions and to help monitor the organization's performance.
- ☐ Assign responsibilities within the organization for collecting data, producing reports, and carrying out routine data analysis.
- ☐ Hire competent accounting staff members who can provide you with timely and understandable financial data essential for helping you make management decisions.
- ☐ Engage professional auditors to review the soundness of internal control and accounting systems and make sure that financial reports and transactions comply with accepted accounting practices.
- ☐ Implement a plan to monitor and review the design and utility of the financial management system on a regular basis.

*The Manager* is designed to help managers develop and support the delivery of high-quality family planning services. The editors welcome any comments, queries, or requests for subscriptions. Please send to:



*The Manager*  
Family Planning Management Development  
Management Sciences for Health  
165 Allandale Road  
Boston, Massachusetts 02130-3400 USA  
Phone number: (617) 524-7799  
Fax number: (617) 524-2825  
E-mail: bookstore@msh.org

The FPMD project is funded by the U.S. Agency for International Development. This project provides management assistance to national family planning programs and organizations to improve the effectiveness of service delivery.

# *The Manager*

## Guide to Computerizing Your Accounting System

A supplement to *The Manager*  
Volume VIII, Number 4, Winter 1999/2000

A supplement to *The Manager*,  
“Understanding and Using Financial Management Systems to Make Decisions”  
Volume VIII, Number 4, Winter 1999/2000

---

## Guide to Computerizing Your Accounting System

---

### ***In This Supplement***

|   |                  |
|---|------------------|
| <b><i>Making the Decision to Computerize .....</i></b>                                    | <b><i>4</i></b>  |
| <b><i>Preparing to Computerize .....</i></b>  | <b><i>7</i></b>  |
| <b><i>Implementing Your Computerization Project .....</i></b>                             | <b><i>10</i></b> |
| <b><i>Forming the Project Team .....</i></b>  | <b><i>10</i></b> |
| <b><i>Preparing the Guiding Documents .....</i></b>                                       | <b><i>10</i></b> |
| <b><i>Reviewing the Current System .....</i></b>  | <b><i>11</i></b> |
| <b><i>Developing Proposed Modifications .....</i></b>                                     | <b><i>11</i></b> |
| <b><i>Selecting and Purchasing Software .....</i></b>                                     | <b><i>11</i></b> |
| <b><i>Installing Hardware and Software and Entering Preliminary Information .....</i></b> | <b><i>12</i></b> |
| <b><i>Preparing and Training Staff .....</i></b>  | <b><i>13</i></b> |
| <b><i>Monitoring and Evaluation .....</i></b>   | <b><i>13</i></b> |
| <b><i>Illustrative Timeline .....</i></b>   | <b><i>14</i></b> |
| <b><i>Selecting and Purchasing Software .....</i></b>                                     | <b><i>16</i></b> |
| <b><i>Defining Software Needs .....</i></b>   | <b><i>16</i></b> |
| <b><i>Understanding Accounting Software Modules .....</i></b>                             | <b><i>17</i></b> |
| <b><i>Evaluating Software and Vendor Options .....</i></b>                                | <b><i>21</i></b> |
| <b><i>Making the Software Work for You .....</i></b>                                      | <b><i>25</i></b> |
| <b><i>Selected Resources on the Internet .....</i></b>                                    | <b><i>26</i></b> |

An effective and efficient financial management system relies on the availability of accurate, timely financial data. Usually these data are provided by an organization's accounting system. Due to factors such as expansion, new reporting requirements, the need to work toward sustainability, and the availability of relatively low-cost technology, more and more organizations are putting in place a computerized accounting

system that will provide them with the data they need, when they need it. Planning for and implementing an efficient computerized accounting system can seem daunting for any manager. This Guide is intended to help you consider some of the factors relevant to making the decision to computerize or upgrade your accounting system.

Most organizations move through a progression of accounting systems. They usually begin with a manual (paper) system, then move to a mix of paper and computerized spreadsheet-based tools, and then finally implement a simple computerized system. Often this computerized system will be a mix of several systems or programs that place data in spreadsheets or databases. Improvements in computer hardware and accounting software make it easier than ever to move from a mix of paper and spreadsheet-based tools to a computerized system, or to upgrade an existing system. Lower computer and software costs have also reduced the financial commitment required to make this change.

This guide is written for managers who are considering whether or not to computerize their accounting systems, or are in the process of preparing for or implementing a previous decision to computerize. It may also be useful for managers who are evaluating their programs' needs for computerized accounting systems, making recommendations to their regional or central offices on technology, or implementing new automated systems or accounting upgrade efforts.

The guide provides an overview of all phases of automating or upgrading an accounting system, from making a decision on computerizing, to preparing for computerization, and implementing a computerization

project, and focuses on a key step in the process: selecting and purchasing software. The guide provides lists of questions to help identify the problems in your current system and understand whether or not computerization will solve these problems. It also provides a tool that will help you evaluate software packages and vendors and understand how they might or might not meet your needs.

This supplement was written by Amos Kimunya, Paul Fishstein, and Natalie Gaul. Amos Kimunya is Director of Matrix Development Consultants in Nairobi, Kenya. He has worked with nongovernmental organizations (NGOs) in Kenya, Nigeria, Tanzania, and the United Kingdom on financial management, financial systems, and sustainability. Paul Fishstein and Natalie Gaul are Senior Program Officers with the Family Planning Management Development project of Management Sciences for Health. Paul Fishstein has worked with NGOs in Asia and Eastern Europe on sustainability, and he is co-leader of MSH's Financial Management Cluster. Natalie Gaul has worked with NGOs and public sector organizations in Asia, the Caribbean, and Eastern Europe on accounting systems, financial and operations management, and project management. The authors and editors would like to acknowledge the review and input of Cheryl Davis Ivey, Executive

Director of the National Reproductive Health Board in Kingston, Jamaica.

## Making the Decision to Computerize

The decision to automate your accounting system generally depends on your need to have accurate, consistent, and timely data in a variety of reporting formats. Do you already have a good paper system in place? Are you finding that your accounting staff have to spend much of their time filling out spreadsheets manually? Are you frustrated at not being able to test new cost scenarios using new information? Are donors delaying the release of funds due to delays in submitting your reports? If you answered "yes" to any of these questions, your organization may benefit from computerizing or upgrading its accounting system.

### Looking at the Benefits of Computerization

Automating your accounting system can have many tangible and intangible benefits. The following table provides a quick overview of the benefits of a well-functioning computerized accounting system.

| Considering Computerization: Needs and Benefits                    |  |
|--|--|
| Managers' Needs  | Benefits of a Computerized System  |
| Managers require timely and accurate information to make decisions | <ul style="list-style-type: none"> <li>• The system automatically verifies account numbers and rejects data that don't comply with prescribed criteria</li> <li>• Missing checks or vouchers are immediately evident</li> <li>• Tedious recording processes are automated</li> <li>• A variety of reports can be quickly generated on demand</li> <li>• Managers can query the system for ad hoc information</li> <li>• Data processing and analysis are faster and more accurate</li> </ul> |
| Managers must identify and solve problems                          | <ul style="list-style-type: none"> <li>• Allows managers to more easily recognize problems, such as slow collection of accounts receivable, diminishing sales, or cash needs</li> <li>• Eliminates the need for manual investigation of accounts receivable, which can be a tedious and time consuming task, especially when there are changes in staff</li> </ul>   |



| Considering Computerization: Needs and Benefits  |   |
|--|---|
| Managers' Needs  | Benefits of a Computerized System   |
| Managers need to look at data from a variety of perspectives in order to make good management decisions  | <ul style="list-style-type: none"> <li>Managers can use the system to look at data in different ways; <i>for example, expenditures can be reported by supplier, by item purchased, by unit, or by time period</i></li> <li>The system can generate reports that compare data by period, such as current year to prior year, and provide trend information, such as growth or downturns</li> <li>Improved reporting capabilities allow managers to monitor expenditures against line-item budgets, track account balances, and predict future cash flow needs</li> <li>A single, computerized system can provide data needed by both financial and programmatic managers</li> <li>Monetary and stock controls are more easily implemented</li> <li>Organizations with offices or service delivery sites in several locations can manage their finances in a more coordinated and consistent manner and share information among their cost centers</li> </ul> |
| Managers must fulfill different reporting requirements and provide financial information in formats requested by their governing bodies, funding sources, or senior managers | <ul style="list-style-type: none"> <li>Reporting formats can be changed at the push of a button or the click of a mouse</li> <li>Once accurate data are in the system, most reports can be printed on demand</li> <li>Staff can make on-line queries of the data as needed and fulfill management requests for reports quickly and easily</li> <li>Managers can more easily satisfy statutory and donor reporting requirements with reports such as profit and loss, balance sheet, trial balance, and customized donor reporting</li> <li>Reporting requirements are satisfied more quickly, with less effort</li> <li>Auditors have better access to required transaction trails, such as a check number, amount, payee, and date. This helps to reduce the time needed to provide this type of information and documentation during an audit</li> </ul>  |
| Managers must be more cost effective, that is, they must do more with less   | <ul style="list-style-type: none"> <li>Allows an organization to handle a greater volume of work or satisfy complex reporting needs with fewer staff</li> <li>Uses the features and functionality of Windows-based technology, which allows a variety of software to be compatible and used for various applications</li> <li>Increases data storage capacity, allowing managers to enhance existing systems or satisfy new business or management needs in a cost-effective manner</li> </ul>  |

Before making a decision about computerizing, you must have a solid and effective accounting system in place. Computerizing a weak system will not suddenly improve it. The previous box presented

some of the “right” reasons to computerize your accounting system. The following box provides a few of the “wrong” reasons.

## “Wrong” Reasons to Computerize Your Accounting System

- “Everyone’s going computer...it’s the thing to do.”
- “Our accounts are in such a mess...we should computerize them and get organized.”
- “We’ve just had some computers donated to us...we should use them.”
- “The Finance Office is inefficient...they’re spending too much time doing the accounts.”
- “I’ve seen new software in a magazine...it’s the latest thing and just what we need!”

### Reviewing the Limits and Pitfalls

Although there are many benefits to computerizing an accounting system, you should consider carefully what a computerized system can do for you and how it might help you process data for making decisions. Consider the following:

- **A computerized system needs accurate and current data.** Just because your system is computerized does not mean that it is current or error-free. You should update and check your data on a regular basis.
- **Computers cannot solve your accounting system problems.** By itself, a computerized system cannot balance your books, improve your organization’s structure, increase your cost-efficiency, or improve management. It will not solve such problems as unskilled or unmotivated staff, poor managerial skills, inappropriate operating policies, or unfavorable external conditions. Computerizing will not improve a problematic accounting system, but it can improve a well-functioning system.
- **Computerizing your accounting system may require new skills in your organization.** You may need to hire new staff or train existing staff. You may need to reorganize your accounting department, let some people go, or hire new managers. Staff may resist these changes. You will need to spend time and resources orienting them to the need for and benefits of the new system in order to avoid implementation delays or failures.

- **Computerization involves risks.** Your staff should watch for viruses and other threats to data integrity. Confidentiality of sensitive information may be an issue, and access to some information may have to be limited to specific individuals only. Data-entry mistakes could result in inaccurate calculations and an inaccurate representation of your organization’s financial picture. Being aware of these types of risks will help you minimize them.
- **Computerization may have hidden costs.** These costs include the expense of purchasing peripheral equipment (zip drives, additional printers) and needed supplies (toner, paper). Future costs include upgrading your system, seeking technical support, and storing data.
- **Computerizing your entire system all at once may be inefficient.** Attempting to automate everything at one time may result in a system that is cumbersome, unreliable, inefficient, and demoralizing to your staff. A phased approach may work better.

Taking time and care to consider these issues is an important part of making a decision about computerizing your accounting system for the first time or upgrading your current system. Once you have made the decision to computerize or upgrade, you can prepare for the process. Careful preparation can significantly reduce your need for outside technical assistance and the overall cost of computerization. It will also increase your ability to handle some groundwork internally and help you limit vendor or contractor intervention to times when it is critical.

## Preparing to Computerize

In preparing for computerization, you should ask questions about your organizational capacity, existing systems, human resources, physical space, financial resources, and information needs. All too often, a discussion of computerizing an accounting system is limited to selecting the software. This narrow view does not take into account the many other factors

that can make computerization succeed or fail in meeting organizational needs. In particular, you will want to assess your management and accounting needs for a computerized system, and your organization's readiness to computerize.

The following box provides a brief list of questions you should begin with in order to prepare for computerizing.

### Key Questions to Ask When Preparing to Computerize

- What existing business or management problems could computerization solve or minimize?
- What types of information does the organization need from the computerized accounting system in order to answer business or management questions and make management decisions?
- Who will be receiving this information and will they benefit from its increased availability and timeliness? What types of management decisions will they be able to make with this information?
- Is funding available for computerization? Does your budget have limits? Are donor-imposed requirements a barrier to computerization? Is more timely and accessible information worth the cost of purchasing, installing, and maintaining a computerized system?
- What is the current information technology capacity of your organization, and can it support computerization?

## Assessing Management and Accounting Needs

In preparing to computerize, you should consider your organization's management needs and what it wants from its accounting system. Work with other managers in your organization to answer these questions, perhaps in a brainstorming session or by interviewing them individually or in a group. Many organizations find it beneficial to engage a consultant to work with a group of managers to determine organizational needs. A consultant may be able to help identify the true causes of management problems, including those that will not be resolved by computerizing the accounting system.

When assessing your needs, it is especially important to involve managers and staff from

throughout the organization. This will help you get important input from your internal clients, which includes all the potential users of the computerized system. Taking time at this stage to involve a range of users and determine what they want and need from the system will build interest and commitment in the computerization project. You may also want to seek the opinions of major donors, government agencies, external auditors, clients, and suppliers on how computerization might meet their needs.

The box that follows provides sample questions for assessing your computerization needs. These questions are illustrative, and the answers will be different for every organization.

| Sample Questions for Assessing Computerization Needs   |  |
|--|--|
| How will computerization contribute to achieving organizational goals?   |  |
| How complex is the organization? Complexity relates to the size of the budget, the volume of monthly transactions, and the numbers of staff, donors, monetary currencies used, service delivery sites, fiscal years, and users of the accounting information.  |  |
| What do you want your accounting system to do?   | <ul style="list-style-type: none"> <li>• Support day-to-day administrative tasks such as registering patients and printing invoices</li> <li>• Record and report accounting data</li> <li>• Record treatments provided free of charge</li> <li>• Manage commodities, medicines, and other supplies</li> </ul>  |
| What do you want to know from your accounting system, and who will be using this information?  | <ul style="list-style-type: none"> <li>• What kind of information do you need?</li> <li>• What reports will be produced?</li> <li>• Who will be looking at them?</li> <li>• How often are the reports required?</li> <li>• What decisions will they help to make?</li> </ul>   |
| What are managers <i>not</i> getting from the current system, such as speedy access to accurate, useful management information?  |  |
| What are your greatest concerns? What is the largest waste of time in your current accounting system?  |  |
| Does the organization have a chart of accounts adequate to meet the above complexity? Would expanding or revising the chart of accounts improve the quality of reports or financial information?   |  |
| What impact do you want computerization to have? Do you want it to reduce your analysis time, increase the speed of entering and processing data, increase accuracy, improve controls, show trends, or improve the management of purchases and payments? Is the likely impact worth the cost of implementing the new system? |  |
| Which inputs go into the system?   | <ul style="list-style-type: none"> <li>• What data should be entered into the computerized system in detail?</li> <li>• What data should be entered in summary form only?</li> <li>• What data should remain in a manual system and not be entered into the computerized system?</li> <li>• Should some parts of the computerized system, such as payroll, be contracted out to a third party?</li> <li>• Will all offices and clinics of the organization be computerized? Will they be networked?</li> </ul> |
| Should the accounting system be integrated with other systems, such as payroll and inventory of supplies? Is this necessary? If so, how will the systems be linked?  |  |
| Could minor, inexpensive upgrades to the current system solve your management needs?   |  |
| Have other possible solutions (e.g., training staff, hiring staff with different skills, modifying operating procedures) to your management needs been explored?   |  |
| Have all the current and future needs been identified? (This is a critical point; many organizations invest in a system that they rapidly outgrow!)  |  |

## Assessing the Readiness of Your Organization

If you decide that computerization will indeed meet your organization's management and accounting needs, ask the following questions to help you identify your

readiness to computerize. For each question, the table provides a list of suggested follow-up actions.

| Assessing Organizational Readiness to Computerize   |  |
|---|--|
| Question  | Possible Follow-up Actions   |
| Has senior management made a commitment to computerizing the accounting system and ensuring that all key staff are involved in the process?           | <ul style="list-style-type: none"> <li>• Hold meetings to brief senior management on plans</li> <li>• Discontinue the project if senior management does not commit</li> </ul>  |
| Does the organization have the trained staff required to run the system?  | <ul style="list-style-type: none"> <li>• Assess skill needs</li> <li>• Set up a training program in advance of system changes</li> <li>• Recruit staff with needed skills</li> </ul>   |
| Are staff prepared to accept the new system?  | <ul style="list-style-type: none"> <li>• Brief staff on plans, explaining benefits for both staff and the organization as a whole</li> <li>• Give staff the opportunity to ask questions</li> <li>• As appropriate, reassure staff they will not lose their jobs</li> </ul>                      |
| Are staff willing to devote time to training, and can this training be incorporated into their work schedules?  | <ul style="list-style-type: none"> <li>• Develop a training plan that incorporates training into work schedules</li> <li>• Explain professional development benefits</li> </ul>  |
| Is an acceptable and functional manual system already in place?   | <ul style="list-style-type: none"> <li>• Identify any weaknesses in the current system and strengthen it</li> <li>• Postpone computerization until acceptable and functional manual system is in place</li> <li>• Assess whether improvements have eliminated the need to computerize</li> </ul> |
| Do managers value and use the information currently produced by the manual system?  | <ul style="list-style-type: none"> <li>• Identify decisions that managers can make with the information</li> <li>• Conduct training on the use of information</li> <li>• Brainstorm with managers about the information they need</li> </ul>   |
| Do you have a budget for training, maintenance, support, consumables, and upgrades to hardware and software (including the initial cost of hardware)? | <ul style="list-style-type: none"> <li>• Develop a realistic and comprehensive budget for all aspects of computerization and include it in the annual budget</li> </ul>  |
| Have you identified local technical support for the system?   | <ul style="list-style-type: none"> <li>• Identify and assess local technical support, if available</li> <li>• If local support is not available, determine the procedures and costs involved in securing support and decide whether to proceed</li> </ul>  |
| Are other support systems (telephone, Internet, computer network) available, adequate, and practical?   | <ul style="list-style-type: none"> <li>• Determine weaknesses in communication and support systems and develop plans to remedy them</li> </ul>   |
| Is the power supply reliable?   | <ul style="list-style-type: none"> <li>• Ensure that adequate power and backup power are available</li> </ul>  |
| Is the physical environment appropriate for the computerized system? Are funds available to make needed improvements?                                 | <ul style="list-style-type: none"> <li>• Identify what is missing, estimate the costs of providing it, and ensure that sufficient funds are budgeted for the improvements</li> </ul>   |



---

## Implementing Your Computerization Project

A computerization project should involve a wide range of staff and affect many different departments and levels in your organization. You will need to form a project team, set your objectives, meet regularly, establish your reporting requirements, conduct an appraisal (including a cost analysis), develop a realistic budget, and develop an achievable time line. Forming a project team with members from all areas of the organization is critical to project success. It acknowledges the impact that the project will have on the entire organization and increases staff commitment to providing accurate data and using the reports that the new system will generate.

The following steps will help you to implement your computerization project:

- Form the project team;
- Prepare the guiding documents;
- Review the current system;
- Develop proposed modifications to the system;
- Select and purchase the software;
- Install the hardware and software, and enter the required preliminary information;
- Prepare and train your staff;
- Monitor and evaluate the project.

The timing of these steps will depend on the size and complexity of your organization. An illustrative time frame is presented in the chart on page 14.

Later sections in this supplement go into more detail on two important aspects of selecting and purchasing the software for your computerization project: defining software needs and evaluating software and vendors, beginning on page 16.

## Forming the Project Team

You should select a project manager to oversee the entire process: to coordinate meetings with suppliers, consultants, and staff, and to monitor and update senior management on progress. The project team should include key staff members from the accounting department, as well as program staff and managers from other departments that will use the new system's reports. Be certain to include front line financial staff who will work with the system daily, not just senior managers. If your organization already has a computer department, be sure to include the system administrator. Also include any consultants, volunteers, or others who will be managing or guiding the project. Bringing a team together at the start of the process will ensure that all perspectives are represented.

## Preparing the Guiding Documents

Invest time at the beginning of the project to prepare formal documents to guide the computerization process. Having these documents available for the team to use in following the implementation steps will make the process smoother at later stages. Guiding documents should include:

- Statement of need;
- Definition of objectives;
- Framework for review of existing systems;
- Budget;
- Terms of reference for the supplier and consultants, if required;
- Time line, with staff responsible for tasks;
- Monitoring and evaluation plan, including monitoring benchmarks and indicators of success.

**Budget.** Make sure that the budget is comprehensive and includes resources for training, supplies, and reprinting forms.

---

**Time line.** In developing the time line, assign realistic deadlines, paying particular attention to certain tasks that depend on other tasks being completed first. Build in time for testing and modifying the system. Failure to meet unrealistic deadlines can lower staff morale. Whenever possible, avoid undertaking the project at a peak time, such as year-end closing, to lessen the impact of the time needed to transfer data from the manual to the computerized system.

### **Reviewing the Current System**

Before making any decisions on a new system, the project team needs to do a comprehensive review of the organization's current internal procedures and documentation on which a computerized accounting system rests. You should ensure that the manual system's books are in balance and the information is accurate. The team should review:

- Needs of staff and all end-users;
- Procedures at all service and data-entry points;
- Chart of accounts, account classifications, and cost centers;
- Report and budget designs;
- Coding structures for items such as drugs, family planning supplies, and project activities;
- Master files, such as accounts, costs, suppliers, vendors, and patient records;
- Input control checks, such as input forms and verification checks.

### **Developing Proposed Modifications**

Based on the results of the system review, the project team should identify needs that are not being met by the current system and develop proposed modifications that will help the organization meet these needs. It is important to document procedures and requirements before selecting new software. As

previously noted, all staff whose work will be affected by the new system should be involved in formulating the modifications. These staff include front line users such as the accounting staff, as well as program managers who will use financial reports to make programmatic decisions. You may have to go through several iterations before you are satisfied, but this is time well spent. Consider holding a series of half- or full-day meetings in which representatives of all stakeholders review the proposed modifications. For this step, the team should:

- Modify financial procedures and forms, as required;
- Revise the chart of accounts and related coding scheme;
- Design management reports.

### **Selecting and Purchasing Software**

This step involves defining your software needs, evaluating accounting software modules, and evaluating software packages and vendors.

**Define software needs.** Your software needs depend on such factors as the size of your organization, the number and type of transactions that must be entered (such as the number of currencies you work in and the volume of services you are recording), and your reporting requirements. A good vendor should be able to assist you in defining these needs. A vendor's responsiveness in helping you identify software needs is an important part of the vendor evaluation process. On your own or with a vendor's assistance, do preliminary research on the Internet and in trade journals and other publications. Interview organizations and audit firms that have implemented a computerization project, and ask them for names of possible vendors. When defining your software needs, you should:

- Develop specifications for software and technical support;
- Assess whether you need specialized nonprofit software.

#### **Evaluate accounting software modules.**

Accounting software modules follow the modules in a typical accounting system. Low-end software contains all the modules in one package, while mid-to high-end packages sell them separately, and you purchase and install only the ones you need. When evaluating accounting software modules, you should:

- Determine which accounting software modules address your needs best;
- Determine whether you need a low-end or a high-end package.

**Review available software and vendors.** When you contact vendors, ask them for references and the names of their current clients. Arrange for the vendors to demonstrate software packages. Ask them to demonstrate only between four and six packages in all. Keep in mind, of course, that vendors are likely to have an interest in selling their own products. Do a technical review of the software packages, negotiate terms with the vendor, and purchase the software. When evaluating software and vendors, you should:

- Develop evaluation criteria for the software and vendor;
- Prepare a list of questions to ask the vendor;
- Request quotations from software vendors or consultants;
- Select the best candidates for further review;
- Have vendors demonstrate the software for staff;

- Perform a technical review of the short-listed software, using evaluation criteria;
- Contact the references and current clients of the potential vendors;
- Select software based on evaluation criteria;
- Negotiate terms with the vendor;
- Purchase software.

These three activities are discussed in greater detail in the section “Selecting and Purchasing Software,” which begins on page 11.

### **Installing Hardware and Software and Entering Preliminary Information**

Implementing a computerization project can take place over a span of a year or more from initial installation through phasing out of the manual or old computerized systems. The software vendor may be able to assist in several of the following steps:

- Install hardware and other information technology enhancements, if necessary;
- Install additional software such as network software;
- Install accounting software;
- Input opening balances and other required preliminary information, such as organization, vendor, and customer information;
- Begin running computer system in parallel with existing systems (such as a manual system);
- Correct any problems with software or financial management procedures;
- Reduce use of the manual system;
- Phase out the manual system.

---

Installing hardware and software requires consistent preparation of human resources, including training existing staff and, possibly, hiring new staff. Do not wait until the software is installed to begin training staff who will be using the software. The phase-out of old systems may go faster if staff build confidence in the new, computerized system before installation is complete. You may want to assess progress and readjust schedules periodically.

### **Preparing and Training Staff**

Often, an organization focuses on the system itself (hardware and software) during computerization and neglects preparing and training the staff who will use the system outputs to make decisions. It is critical that your staff understand the system. Initial and periodic orientations will help them use the system effectively and reduce their anxiety about the changes brought on by the new system. Training can be broadly categorized into the following: general computer training, such as word processing, keyboarding, spreadsheets; specific accounting system training; and management reporting, interpretation, and decision making. For this step, the organization should:

- Provide preliminary training or orientation to software in advance of implementation;
- Hire new staff, such as temporary staff to create databases and input prior transactions;
- Train existing staff;
- Revise job titles, descriptions, and roles and responsibilities, if necessary;

- Train a system administrator on software maintenance, including updates, logging of changes, and backups;
- Train accounting staff on the use of system modules;
- Train management and program staff in interpretation of reports.

### **Monitoring and Evaluation**

Periodically compare project progress with benchmarks established at the start of the project to keep the project team on track and keep staff informed and enthusiastic about the ongoing changes. Periodic meetings will provide an opportunity for staff to raise implementation issues, identify roadblocks and solutions, and reallocate their time and other resources as needed.

Recognize that you may have to modify your time line as conditions change and you learn more about what is going smoothly and what is not. Provide stakeholders with regular updates to avoid unpleasant surprises and help build excitement about achievements and milestones. During a final evaluation, review your original indicators of success to see if they have been achieved, and if they weren't achieved, determine why they weren't and note any changes made to the original design and why.

The following Gantt chart presents an illustrative schedule for computerizing an accounting system. Please note that some steps and tasks may occur concurrently.

## Illustrative Timeline for an Accounting Computerization Project

| ACTIVITY  | Month 1 |   |   |   | Month 2 |   |   |   |
|---|---------|---|---|---|---------|---|---|---|
|   | 1       | 2 | 3 | 4 | 5       | 6 | 7 | 8 |
| <b>Form the project team</b>  |         |   |   |   |         |   |   |   |
| Nominate members to serve on the project team                               | X       |   |   |   |         |   |   |   |
| Identify project manager  | X       |   |   |   |         |   |   |   |
| <b>Prepare the guiding documents</b>  |         |   |   |   |         |   |   |   |
| Prepare statement of need   |         | X | X | X |         |   |   |   |
| Define objectives   |         | X | X | X |         |   |   |   |
| Develop framework/plan for review of current system                         |         | X | X | X |         |   |   |   |
| Develop budget  |         |   |   | X |         |   |   |   |
| Write terms of reference for consultants                                    |         |   |   | X | X       |   |   |   |
| Develop a time line   |         |   |   | X | X       |   |   |   |
| Design monitoring and evaluation plan                                       |         |   |   | X | X       |   |   |   |
| <b>Review the current system</b>  |         |   |   |   |         |   |   |   |
| Query staff (including end-users) on their needs                            |         |   |   |   | X       | X | X | X |
| Review financial procedures at service and data entry points                |         |   |   |   | X       | X | X | X |
| Review chart of accounts and coding scheme                                  |         |   |   |   | X       | X | X | X |
| Review report and budget designs  |         |   |   |   | X       | X | X | X |
| Review existing coding structures   |         |   |   |   | X       | X | X | X |
| Review input control checks   |         |   |   |   | X       | X | X | X |
| <b>Develop proposed modifications to the system</b>                         |         |   |   |   |         |   |   |   |
| Modify financial procedures and forms, if needed                            |         |   |   |   |         |   |   | X |
| Revise chart of accounts and related coding schemes                         |         |   |   |   |         |   |   | X |
| Design management reports   |         |   |   |   |         |   |   | X |
| <b>Select and purchase software</b>   |         |   |   |   |         |   |   |   |
| Develop specifications for the software and technical support               |         |   |   |   |         | X | X | X |
| Determine the accounting software modules required                          |         |   |   |   |         | X | X | X |
| Determine whether a low-end or high-end package is needed                   |         |   |   |   |         | X | X | X |
| Assess need for specialized nonprofit software                              |         |   |   |   |         | X | X | X |
| Develop evaluation criteria for the software                                |         |   |   |   |         |   |   | X |
| Develop a list of questions for vendors                                     |         |   |   |   |         |   |   |   |
| Request quotations from software vendors or consultants                     |         |   |   |   |         |   |   |   |
| Select best candidates for further review                                   |         |   |   |   |         |   |   |   |
| Have vendors/consultants demonstrate software for staff                     |         |   |   |   |         |   |   |   |
| Perform technical review of short-listed software using evaluation criteria |         |   |   |   |         |   |   |   |
| Contact references and clients of the potential vendors                     |         |   |   |   |         |   |   |   |
| Select software based on evaluation criteria                                |         |   |   |   |         |   |   |   |
| Negotiate terms with vendor/consultant                                      |         |   |   |   |         |   |   |   |
| Purchase software   |         |   |   |   |         |   |   |   |
| <b>Install hardware and software and input information</b>                  |         |   |   |   |         |   |   |   |
| Purchase and install new hardware (if necessary)                            |         |   |   |   |         |   |   |   |
| Purchase and install additional software (if necessary)                     |         |   |   |   |         |   |   |   |
| Install selected accounting software  |         |   |   |   |         |   |   |   |
| Input required information from old system                                  |         |   |   |   |         |   |   |   |
| Run computerized system in parallel with old system                         |         |   |   |   |         |   |   |   |
| Reduce use of manual system   |         |   |   |   |         |   |   |   |
| Phase out use of old system   |         |   |   |   |         |   |   |   |
| <b>Prepare and train staff</b>  |         |   |   |   |         |   |   |   |
| Provide general orientations and briefings on the computerization project   | X       | X | X | X |         |   |   | X |
| Identify functions and job skills required by the new system                |         |   |   |   |         |   |   |   |
| Revise job descriptions, roles/responsibilities, and titles (as required)   |         |   |   |   |         |   |   |   |
| Hire new staff (as required)  |         |   |   |   |         |   |   |   |
| Train accounting/finance staff in use of new system and modules             |         |   |   |   |         |   |   |   |
| Train system administrator on software maintenance                          |         |   |   |   |         |   |   |   |
| Train management and program staff in interpretation of reports             |         |   |   |   |         |   |   |   |
| <b>Monitor and evaluate</b>   |         |   |   |   |         |   |   |   |
| Compare project progress against benchmarks                                 |         |   |   | X |         |   |   | X |
| Document roadblocks and identify solutions                                  |         |   |   | X |         |   |   | X |
| Measure indicators of success to see if they have been achieved             |         |   |   |   |         |   |   |   |
| Identify changes made to the original design and why                        |         |   |   |   |         |   |   |   |





---

## Selecting and Purchasing Software

Selecting and purchasing the software you will use to computerize your accounting system is the single most important decision in the computerization process. You should carefully consider the software's capabilities in relation to your organization's computerization needs. You should evaluate accounting software modules and determine ones you will need to install and use. Evaluating software and vendor options is another important part of this process.

Being careful and methodical at this stage will increase your chances of ending up with a responsive and effective computerized accounting system. Many organizations purchase software that is more powerful and complicated than the organization needs, can handle, or can afford. Keep in mind that it may not be possible for the system to do everything that users request without becoming too complicated, labor intensive, or expensive. Carefully weigh your colleagues' expressed desires against what your organization can realistically implement, easily use, and afford.

### Defining Software Needs

Your software needs depend on factors such as the number of monetary currencies your organization must handle and your need for a system that you can customize to suit your needs. Low-end programs are designed for small businesses. They usually have a single user, such as the administrator or the bookkeeper. High-end programs are designed for large businesses with departmental accounting. High-end programs can have multiple users across a large local-area network, or can connect multiple locations in a wide-area network. The number of employees an organization has is not an important consideration when choosing software. The true measure of need is the complexity of the organization's activities, such as the number of transactions handled each month, security needs, the number of currencies handled, and methods of purchasing. Examples of low-end software include Quickbooks, DacEasy, Pegasus, Capital Lite, and Peachtree. Examples of high-end

software include Sun Accounting, Solomon IV, Navision, SCALA, and SAP.

A guiding principle in deciding whether to purchase and install a high-end or a low-end software package is to select the lowest-end package that meets your needs. Avoid using a bigger or more complex system than your needs require. When making your decision, you should consider the:

- Number of transactions or entries that must be recorded;
- Number people who will be entering and using the data;
- Number of currencies;
- Security concerns;
- Methods of purchasing and costs;
- Need for specialized nonprofit software.

**Number of transactions.** Although modern accounting systems do not typically set limits on the number of transactions allowed, low-end systems will usually slow down when they are handling large volumes of data. They work better when handling only a few hundred transactions a month. (Transactions refer to the number of checks, receipts, charges, and journal entries. You can determine your organization's current number of transactions from the existing manual system.) Take into consideration future increases from expansion or new funding, which could increase your need to track new data. Also consider the complexity of the transactions you are recording. *For example, do you charge one invoice to several projects, donors, or general ledger accounts?* A higher-end system, written for large database platforms such as Oracle, Informix, or SQL Server, can process thousands of transactions a day without slowing down.

**Number of currencies.** Low-end programs can usually handle only a single currency. Higher-end programs normally allow entries in multiple currencies. They include a currency conversion table that allows updates whenever exchange rates change, and they can convert to a single currency of choice for reporting. Another currency-related feature might be automatic allocations to "Profit (and Loss) due to exchange rate." Some programs that call themselves

---

multi-currency actually only allow you to maintain a single exchange rate between currencies, which is not very useful for most organizations.

**Security.** Low-end programs may have a password to restrict access, but will usually allow the user to modify prior data. While this makes such programs useful for organizations that are not concerned with security, it can be a serious drawback for larger organizations with multiple accounting staff. Higher-end programs come with extensive security. The administrator can restrict the tasks that each user can perform. *For example, data-entry clerks and finance assistants may have rights to enter vouchers, but not to add new codes or modify records.* In higher-end systems, entry and posting is normally a two-step process, with controls at each stage. Once posted, transactions cannot be modified, except by making adjustment entries, and the system creates extensive audit trails that show which user made each entry and subsequent modification.

**Methods of purchasing and costs.** Low-end programs are normally sold as a single product, and you may have to purchase a separate package for each user. High-end programs are normally sold by the module, and the price may vary with the planned number of users. For instance, a five-user package that contains general ledger, accounts payable, and accounts receivable modules might cost four times as much as the same package for one user. A ten-user version of the same package, with modules for multi-currency, stock control, purchasing, and fixed asset register might cost as much as 20 times as much as a low-end single product. Accounting software modules are discussed in more detail in the next section, “Understanding Accounting Software Modules.”

**Need for specialized nonprofit software.** Some software is written specifically for nonprofit organizations. These packages are usually strong on the side of grant receipts, fund accounting, and donor reporting, and will usually allow many levels of account sub-classification. *For example, nonprofit software can allocate a given check to the account code for vehicles, to the sub-account code for a certain vehicle, to a branch office, and to the donor paying for the vehicles.*

Most software that is readily available is written for commercial businesses, but the better ones can be adapted to the needs of nonprofit, nongovernmental, or health organizations. If your organization has several donor accounts with specific requirements and you must track expenses by funding source or use several currencies, nonprofit software may be appropriate.

## Understanding Accounting Software Modules

The modules in accounting software follow the modules in a typical accounting system. The major accounting software modules are the system manager, general ledger, accounts receivable, accounts payable, inventory, payroll, and fixed assets. Most mid- to high-end accounting software has these modules available separately, and you may choose to purchase only those modules that suit your computerization needs. Most low-end accounting software packages contain all the modules you need in one package, and you can choose which modules to install and use in your system.

The modules that you install will depend on such factors as the size and complexity of your organization, your existing financial system, and the expertise of your accounting staff. *For example, many organizations outsource certain accounting functions, such as payroll, to another firm.* If you choose to outsource this function, you may not need a payroll software module. Small organizations that have few transactions to record may choose to enter accounts receivable or accounts payable in manual journals and post only the summarized results to a general ledger module each month. This would require installing the general ledger software module but not the modules for accounts payable or accounts receivable. Your team should consult the accounting staff and auditors and review legal standards when deciding which modules to computerize.

Installing unneeded modules increases the cost and complexity of a computerized finance system. Consider seeking expert advice in identifying your needs for different modules. Be sure to take future growth into consideration, and evaluate whether you can modify a software package by adding additional

modules in the future if the organization expands or you need to revise the system.

The table that follows describes the functions that the most commonly used accounting software modules

perform. Be aware that the names of the modules may vary among vendors, or that some related functions may be linked in the same module.

| Accounting Software Modules and Their Functions |   |
|---|---|
| Module  | Functions   |
| <b>System manager</b>                           | <ul style="list-style-type: none"> <li>Controls the computerized accounting system</li> <li>May define master files, look-up tables, and hardware installed, and department and location descriptions</li> <li>May control the creation of reports</li> </ul>   |
| <b>General ledger (G/L)</b>                     | <ul style="list-style-type: none"> <li>Is the core of the computerized accounting system</li> <li>Receives entries from other modules, such as accounts payable, accounts receivable, and payroll, on a daily, weekly, or monthly basis</li> <li>Creates key financial documents, including trial balance, balance sheet, and profit and loss statement</li> <li>Lets users amend information previously posted</li> <li>Records financial transactions not recorded in other modules</li> <li>Creates budgets, which allows an organization to track differences between planned and actual business results</li> <li>Creates detailed audit trails</li> </ul> |
| <b>Chart of accounts (G/L submodule)</b>        | <ul style="list-style-type: none"> <li>Using a series of codes, identifies and describes assets, income, expenses, and equity being tracked by the system</li> <li>Influences the quality and complexity of the reports generated by the system</li> <li>Must be able to create account codes of the size needed and handle subcoding at the department, location, project, funding source, or activity level, if required</li> </ul>   |
| <b>Balance sheet (G/L submodule)</b>            | <ul style="list-style-type: none"> <li>Reports on the relationship between assets, liabilities, and equity</li> <li>May be able to create reports on cash flow and budgets</li> <li>Must be able to create reports that satisfy legal requirements and meet the needs of funding sources and managers</li> </ul>  |
| <b>Trial balance (G/L submodule)</b>            | <ul style="list-style-type: none"> <li>Reports the balances of each account, usually on a monthly basis, and provides tests to let users know whether entries are being posted correctly</li> <li>In traditional double-entry accounting, reflects assets and expenses as positive numbers (debits) and equity, revenue, and liabilities as negative numbers (credits)</li> </ul>   |

| <b>Accounting Software Modules and Their Functions</b> |  |
|--|--|
| <b>Module</b>  | <b>Functions</b>   |
| <b>Accounts receivable (A/R)</b>                       | <ul style="list-style-type: none"> <li>• Handles the reporting of income owed to an organization from sales on credit, loans, or pledged donations</li> <li>• Often is responsible for billing clients</li> <li>• Often has the ability to recognize deposits to bank accounts</li> <li>• Usually maintains the master files about customers, including names and addresses</li> <li>• May have the capacity to print out a list of all money due, identify the source, and note how long the debt has been outstanding</li> </ul>   |
| <b>Point of sale activities (A/R submodule)</b>        | <ul style="list-style-type: none"> <li>• May be linked to inventory or A/R</li> <li>• Permits automatic updating of inventory and sales when a sale is made, through the use of computerized cash registers or bar-code readers</li> </ul>   |
| <b>Accounts payable (A/P)</b>                          | <ul style="list-style-type: none"> <li>• Handles the reporting of money due to others (purchases on credit or repayment of debt)</li> <li>• May have the capacity to print computer-generated checks to vendors</li> <li>• Maintains master records, such as vendor contact information</li> <li>• Should be able to record invoices by due dates and recognize special payment conditions, such as a discount for early payment of an invoice</li> <li>• Should permit posting of immediate payments (manual checks) that have not been entered into A/P previously</li> <li>• Allows an organization to recognize expenditures and update budgets at the purchase order stage (encumbering costs)</li> <li>• Recognizes costs when the invoice is posted (not just when the cash is released)</li> </ul> |
| <b>Purchase orders (A/P submodule)</b>                 | <ul style="list-style-type: none"> <li>• Allows the organization to recognize goods on order, the agreed upon price, and its effect on the budget</li> <li>• Allows the organization to recognize costs when a purchase order is issued and match invoices received to purchase orders</li> <li>• May provide usage rates for supplies and commodities, indicate when goods should be ordered, and set minimum and maximum order amounts</li> <li>• May automatically update inventory files when goods are received</li> </ul>  |
| <b>Bank reconciliations (A/P submodule)</b>            | <ul style="list-style-type: none"> <li>• Prepares bank reconciliations</li> <li>• Prints a list of the checks written by an organization and recognizes checks that have cleared (Note: less useful when cash or wire transfers are used for most transactions)</li> </ul>   |

## Accounting Software Modules and Their Functions

| Module              | Functions  |
|---------------------|--|
| <b>Inventory</b>    | <ul style="list-style-type: none"> <li>• Updates inventory stocks and prices when goods are received</li> <li>• Reduces inventories at the time of sale</li> <li>• May link to the purchase order system to show goods on order</li> <li>• Should permit recording of commodity expiration or discard dates</li> <li>• May allow inventory updates based on physical inventory or when goods are no longer salable, due to damage or expiration</li> <li>• May have the capacity to alert staff when goods need to be reordered, based on usage analysis</li> </ul>  |
| <b>Payroll</b>      | <ul style="list-style-type: none"> <li>• Tracks information about employees, including wages paid, taxes withheld, benefits provided, and loans due</li> <li>• Manages employee information, such as names and addresses</li> <li>• May have the capacity to print salary checks and maintain year-to-date balances of salary paid, withholding, and benefits</li> <li>• May track holiday, sick leave, and vacation balances</li> <li>• May or may not have the capacity to satisfy legal requirements related to employee compensation, such as income taxes and social benefits</li> <li>• May be better handled through a third-party add-on package, with links to the main software package, or through outsourcing</li> <li>• If outsourcing or using an add-on package, requires establishing clear policies and procedures on how payroll data are entered, so reductions in cash, increases in tax liabilities, and salary expenses are tracked</li> </ul> |
| <b>Fixed assets</b> | <ul style="list-style-type: none"> <li>• Tracks key information, such as cost, date when put in service, title holder, and useful life, of fixed assets (equipment and real property with a useful life of more than one year)</li> <li>• May also track model and serial numbers, location, identification tag number, warranty, service information, and vendor</li> <li>• Should be able to process depreciation costs according to the accounting rules followed by an organization and express the value of assets less the accumulated depreciation</li> </ul>   |

### Miscellaneous modules or third-party add-ons.

Many NGOs, clinics, or nonprofit organizations may need to handle special tasks, such as mass mailings to members, fund raising, and grant management. It may be possible to use software that can integrate these activities with the financial system. This type of an add-on can be costly. You may also be able to handle these activities through databases or word processing programs.

### Final thoughts on modules.

The names of the individual accounting software modules are not important. Some software may merge the functions of several modules into one. Your primary concern is to ensure that your organization's financial system is handling all its functions. In your evaluation of software modules, you should analyze software functionality, cost, complexity, and speed. This will help you compare the benefits and costs of different software options.



---

Your goal is to keep your system as simple as possible while meeting your current and potential needs. More complex systems can increase the costs of your hardware and training, and increase the potential for data corruption.

## Evaluating Software and Vendor Options

In selecting software for computerizing your accounting system, the team should ask questions about the system's costs and the human and other resources that will be needed to support it. The team should also review available software and vendors.

### Asking the Right Questions

There are at least seven questions you and your team should ask in evaluating your software and hardware needs. They are:

- Should we purchase the system or develop it ourselves?
- What are the system's true costs?
- Who will provide the required hardware?
- Who will provide support?
- What human resources do the software and hardware require?
- What other criteria should we consider?

**Should we purchase the system or develop it ourselves?** The main consideration in selecting software is whether to purchase customized software or a commercial software package. Commercial software may meet your needs and be more cost-effective than custom-designed software. Commercial software from reputable developers usually comes with a warranty, regular upgrades and enhancements, available support, and training. Previously, the flexibility of custom software was a good selling point. But the newer commercial software packages are flexible enough to meet the needs of most organizations. If you have any truly unique requirements, such as specific donor or government reporting requirements, you can probably meet them by using a third-party add-on or by interfacing with database, spreadsheet, or word-processing programs already in use.

**What are the system's true costs?** Some costs are obvious; others are not. Obvious costs include purchase price, installation, and training. Hidden costs include licenses, maintenance, customizing, new input documentation, costs of future upgrades, and consumables. Make sure that the suppliers give you the full cost picture, and be sure to add in your training and organizational costs. Contact the vendor's current or recent clients and compare their actual experiences with vendor estimates.

**Do we have the required hardware?** Your computer hardware must be capable of running the selected software, both now and in the future. Consider any future plans that your organization may have to network offices or clinics. When looking at your hardware requirements, consider the following components:

- Computer system (CPU, monitor, keyboard, mouse);
- Backup devices (zip drive, tape drive);
- Uninterrupted power supply and power stabilization;
- Printers that will support the paper sizes for spreadsheets, other accounting reports, and computerized checks (if required), and will perform with adequate speed and print quality.

Don't limit your software selection to a package that will run on the computer hardware currently available in your organization. Your needs may be greater than your current hardware can handle. *For example, the software that will meet your needs may require greater memory or a different operating system than your hardware has now.* Be prepared to consider purchasing new computers to run the new software, if necessary.

**Who will provide support?** What happens when you have technical problems with the software or hardware? Support strategies for hardware and software include having support skills in-house, participating in a user group, paying for assistance on a per-call basis, and signing a maintenance contract. Investigate the available options and evaluate their relative benefits. The level and quality of support may vary by vendor.



Currently, many software vendors provide telephone or Internet support. Do you have the necessary infrastructure in your area to access this type of support? If you need more intensive support from a vendor or consultant, be sure to include this in your computerization project budget. Providing staff with adequate access to support during project start up will save money in the long term and reduce the cost of correcting errors later.

**What human resources do the software and hardware require?** Organizations tend to underestimate the human resource requirements of upgrading an accounting system. Older staff, while trained and experienced in the principles of accounting, may not have experience with computerized accounting systems. Training needs will depend on the staff available and their level of experience. In some cases, you may have to hire additional staff with the necessary skills. This may require that you reorganize your accounting department or re-assign staff. In making your software decision, you should consider whether your organization is willing to make these types of changes or not.

**What other criteria should we consider?** Other features, some of which are commonly overlooked, are more subjective. Ideally, software should be user-friendly. New Windows-based software has enhanced the ability of new users to quickly master new programs. Features such as look-up tables, on-line help messages, and easy-to-navigate menus all enhance software user-friendliness. Another major selection criterion is the vendor. You will likely establish a long-term relationship with a vendor firm. The vendor's ability to provide full service installation, implementation support, training, and system upgrades adds significant value to your software selection. Other vendor considerations include reputation, responsiveness, and capacity to provide technical support. You should take as much care in selecting the vendor as you do in selecting the software itself.

## Reviewing Available Software and Vendors

Once the team has defined the requirements of the computerized system, it should review the ability of different software packages to meet the system's needs. Make sure to identify which needs are critical. Any software that does not meet these critical needs should not be considered further.

The vendor is an important part of this evaluation process. When contacting vendors, be prepared to tell them your system's critical software requirements. This will help vendors make an appropriate software suggestion or choose not to participate in the project.

Below is a sample tool for you to use in analyzing software choices and comparing products. This tool will help you determine whether a software package meets your system's minimum, or essential, requirements. It will also help you to determine which packages satisfy the greatest number of needed capabilities and to compare their costs and benefits. Please note that you should use one form for each software package that you evaluate.

The form has six columns. In the "Minimum Requirements" column, the team should note any capabilities that the software and/or vendor must have. Making these requirements clear will help vendors understand which capabilities are negotiable or not. The "System Capabilities" column provides a comprehensive list of different software and vendor capabilities. The four columns on the right identify the "Availability" of these different capabilities. They may be available through one of four options:

- As part of the software's base package;
- As an add-on software module from the same vendor;
- As a third-party add-on, provided by another software vendor and used in conjunction with the primary vendor's software;
- By modifying the software programming code, which customizes the software to your specifications.

## Software and Vendor E

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |    |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----|
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | </ |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----|

| Min<br>Req       | System Capabilities  |
|------------------|--|
| <b>Reporting</b> |  |
|                  | 30. Able to see reports on screen?   |
|                  | 31. Able to print reports to export file?  |
|                  | 32. Able to see line item detail?  |
|                  | 33. Useful standard reports?   |
|                  | 34. User customizable reports (e.g., change reporting dates, report breaks, columns)?  |
|                  | 35. User-programmable reports?   |
|                  | 36. Able to provide reports based on certain variables or criteria (e.g., seminar cost in a certain area, total costs of Clinic A only)? |
|                  | 37. Graphical depiction of certain reports, such as bar graphs or pie charts?  |
|                  | 38. Able to customize printed reports (e.g., statements and invoices)?   |
| <b>Security</b>  |  |
|                  | 39. Password protection for general system access?   |
|                  | 40. Password restriction for specific system functions?  |
|                  | 41. Does it create an audit trail?   |
| <b>Training</b>  |  |
|                  | 42. Sufficient training included with the system?  |
|                  | 43. Additional cost of training to completion of installation?   |
|                  | 44. Training customized for implementation at the organization?  |
|                  | 45. Training for management in interpretation of reports?  |
| <b>Support</b>   |  |
|                  | 46. Supplied documentation sufficient and understandable?  |
|                  | 47. Immediate telephone support available?   |
|                  | 48. Immediate on-site support available?   |
|                  | 49. Support available via the Internet?  |

---

## Making the Software Work for You

Once you have analyzed your current and future computerization needs, you may be able to more precisely identify the benefits you seek and how implementing a computerization project can help you achieve them. Treating computerization as a project by forming a project team, doing a comprehensive assessment, identifying your objectives and activities, setting realistic deadlines, producing regular reports, developing a complete budget, and establishing sensible indicators of achievement, will enable you to more easily achieve your desired results.

If you want a computerization project to yield expected benefits, you should:

- **Be realistic about what you want the system to do.** Don't over-engineer the system. A system that has a combination of manual and computerized modules may meet your needs better than a completely computerized system. Similarly, it may be easier to keep some computerized accounting modules separate, rather than creating an automated system that is seamlessly connected. Divide tasks between computers and humans according to what each does best.
- **Make sure that your basic financial system is in order before you computerize.** Automating a bad financial management system provides few benefits and many

frustrations. Pay attention to the supporting documentation and procedures to ensure that the raw data entered into your accounting system are of high quality.

- **Input only the information you need.** If branches and clinics are keeping their own records, consider inputting only summary-level information at the central level. Requiring staff to collect and input data that you will not use is a waste of time and money and can lower staff morale.
- **Focus on what you want to get from your accounting system.** Use the information and make sure that managers get feedback reports. This sends the message that you are serious about the computerized system and committed to good management. When staff know that someone will look at the information they are generating, they will put more effort into ensuring that the information is correct and timely.
- **At every step and decision point, think about the human resources—the people—who are going to use the system.** Involving all staff in the computerization process and providing training as needed will help ensure a motivated workforce and an efficiently functioning system. Involve all concerned parties—not just the accountants—in the process. Make financial management everyone's interest and responsibility.

## Selected Resources on the Internet

The following is a list of Web sites that financial managers may find interesting or useful as they consider computerizing their financial management systems. Some of the sites focus on marketing the owners' own products and services, although these may also be useful for understanding what software and vendor capabilities are available and for comparing the features that different packages provide. Inclusion in this list does not constitute an endorsement of the site's contents.

**<http://erc.msh.org/>**

The Manager's Electronic Resource Center of Management Sciences for Health contains financial management information and tools under "The Health Manager's Toolkit" and the section titled "Managing Your Organization's Finances."

**<http://www.sbt.com/offers/199/index.html>**

SBT Accounting Systems has a free booklet entitled "How to Choose Accounting Software."

**<http://www.tatebramald.co.uk/web/sds/index.htm>**

The Tate Bramald Ltd. Web site contains the full text of a guide to selecting and implementing accounting software, entitled "Seven Deadly Sins: A Guide to Selecting and Implementing Accountancy Systems." You may also order a free hard copy.

**<http://www.tatebramald.co.uk/web/shs/index.htm>**

The Tate Bramald Ltd. Web site also contains the full text of a guide to the software selection process, entitled "The Seven Heavenly Steps." You may also order a free hard copy.

**<http://www.zdnet.com/pcmag/issues/1609/pcmg0xxx.htm>**

*PC Magazine's* May 6, 1997 issue has a matrix that summarizes the features of 10 low-end accounting software programs designed for small businesses. The list also includes links to *PC Magazine* reviews of the products.

**<http://www.zdnet.com/products/stories/reviews/0,4161,278567,00.html>**

*PC Magazine's* Feb. 23, 1998 issue has an article titled "Set Your Records Straight: Eight Accounting Packages Help Small Businesses Keep Track of Their Cash Flow," with reviews of eight small business accounting packages.

**<http://www.zdnet.com/products/softwareuser/>**

ZDNet's "Software Product Guide" has a search feature and contains reviews and articles about many types of software packages. "Financial" is just one of the many software guide links.

**[http://www.acctg2000.com/sw\\_acc\\_publ.htm](http://www.acctg2000.com/sw_acc_publ.htm)**

The Web site Accounting 2000.com: An Accounting Info Source has a fairly comprehensive list of software publishers and product names, along with some contact information.

**<http://nonprofitfinancial.org>**

The Nonprofit Financial Center provides nonprofit organizations with a variety of services and products. They sell the *1999 Software Selection Handbook*, which evaluates 26 commercially available specialized fund accounting software programs.

**<http://www.businessfinancemag.com/accountinglibrary/offer.html>**

*Business Finance Magazine* publishes several resources designed to help managers select accounting software, including "How to Select Accounting Software," "The Accounting Software Sourcebook: An Essential Reference on How and What Accounting Software to Buy," and "The Accounting Library." They are available through the magazine's Web site.

**<http://www.softresources.com/page9.html>**

SoftResources LLC offers a free book “Choosing the Right Software Vendor.” The Web site also provides a list of related sites for software selection.

**<http://www.accountingsoftwarenews.com/>**

*Accounting Software News* is dedicated to providing information to help managers select the right accounting software package. Its Web site contains articles, news, and links to software developers’ sites.

**<http://www.cfonet.com/html/acctgswbg99.html>**

The *CFO Magazine* Web site contains full text for the “CFO Accounting Software Buyer’s Guide 2000.” The guide, updated annually, has reviews of mid-range accounting software systems.

**<http://www.2020software.com/acct.htm>**

2020 Software.com has a matrix with comparisons of some accounting software by price, language, database, and use.

**<http://www.accountingsource.com/index.html>**

AccountingSource.com offers an “accounting software evaluator” service that presents solutions based on your accounting system requirements. The site has downloadable demos, free demo CDs, and an on-line software store.

**<http://www.ctsguides.com/>**

CTS publishes many different guides to choosing software. Titles include *Guide to Selecting Software for Nonprofits and Trade Associations* and *Guide to Accounting Software for Microcomputers & Requirements*. They can be ordered through the Web site.

**<http://rutgers.edu/accounting>**

The Rutgers University Web site, “Rutgers Accounting Web,” or RAW, has a link to “Accounting Resources on the Internet.” The software section of the resources list has links to different accounting software Web sites.

**<http://www.computercpa.com/asw.html>**

The home page of Cohen Computer Consulting calls itself the Accountant’s Home Page. It contains a list of accounting software developer sites, organized by level (low-end through high-end), and provides links to accounting software newsletters and magazines.

**<http://www.blackbaud.com/products/default.asp>**

Blackbaud, Inc. designs software accounting products for nonprofit organizations. Its Web site has summaries of its products, downloadable demonstrations, and a downloadable guide to selecting software.

**<http://www.teamtci.com/systems.htm>**

The Web site of Thorson Computers, Inc. has summaries of six accounting software products: SBT, Skyline, TIW Workshop, Fixed Assets, F9 Financial, and Solomon.

**<http://www.accountinglibrary.com/>**

The Accounting Library site presents, for sale, a software program for computer-based needs analysis. The program is designed to help organizations to define their accounting software requirements, compare their needs against software products, and rank products according to how closely they match organization’s requirements.

**[http://www.choosesmart.com/home/words\\_of\\_wisdom.html](http://www.choosesmart.com/home/words_of_wisdom.html)**

The Web site of Expert Buying Systems, Inc. has a section with software and technology articles about software selection, technology choices, implementation issues, and other related topics.





FPMD is supported by the  
U.S. Agency for International  
Development and implemented by  
Management Sciences for Health.

FPMD  
Management Sciences for Health  
165 Allandale Road  
Boston, Massachusetts 02130-3400  
USA

Phone: (617) 524-7799  
Fax: (617) 524-2825  
E-mail: [bookstore@msh.org](mailto:bookstore@msh.org)  
URL: <http://www.msh.org>

**ISSN 1060-9172**

Printed on  recycled paper